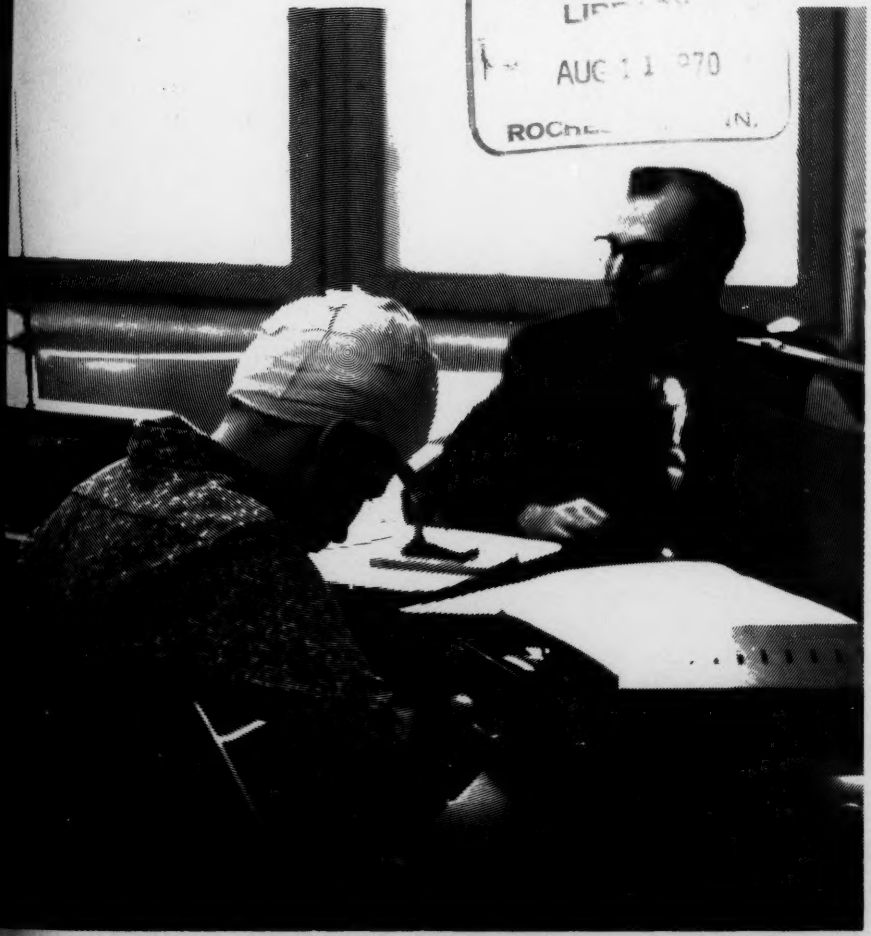
mental health digest

National Clearinghouse for Mental Health Information, Vol. 1, No. 3 March 1969

MAYO
LIBRARY
AUG 1 1 970
ROCHESTER, MN.



cover story

A patient instrumented for intracerebral radio stimulation and recording engages in spontaneous activities—he is playing the guitar—in a psychiatric ward in the presence of a doctor. Explorations of the brain can be performed for as long as necessary without disturbing the patients. A description of this new technique is given in the first digest in this issue.

(Picture courtesy of Dr. Jose M. R. Delgado and the *Journal of Nervous and Mental Disease.*)

mental health digest

The *Mental Health Digest* is a monthly publication of the National Clearinghouse for Mental Health Information of the National Institute of Mental Health. Designed to reflect the whole spectrum of mental health and to present a broad sampling of scientific subject matter and professional points of view, the *Digest* contains condensations of selected journal articles, reviews, Federal and State program documents, and other pertinent material.

Material contained in the *Mental Health Digest* does not necessarily reflect the official policy or position of the National Institute of Mental Health.

Editorial Advisory Board

Stanley F. Yolles, M.D., Chairman

Bertram S. Brown, M.D.
Sidney B. Cohen, M.D.
Robert A. Cohen, M.D.
John C. Eberhart, Ph.D.
George C. Ham, M.D.
Sherman N. Kieffer, M.D.
Gerald N. Kurtz
Alan I. Levenson, M.D.
Morton G. Miller, M.D.
Eli A. Rubinstein, Ph.D.
Gian C. Salmoiraghi, M.D., Ph.D.
Phillip L. Sirotkin, Ph.D.
Nathan Sloate
Louis A. Wienckowski, Ph.D.

Editor: Lorraine Bouthilet, Ph.D.

Art Director: William Bowman

The *Mental Health Digest* is available on subscription only. Subscriptions should be entered with the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. Subscription price: $3.50 a year; Single copy: 30¢. For foreign mailing, add $1.00. However, no additional postage is required for Canada, Mexico, and Central and South American countries except Argentina, Brazil, British and French Guiana, Surinam (Dutch Guiana), and British Honduras. Please make check or money order payable to the Superintendent of Documents.

Use of funds for printing this publication approved by the Director of the Bureau of the Budget, May 20, 1968.

Intracerebral Radio Stimulation and Recording in Completely Free Patients

Jose M. R. Delgado, Vernon Mark, William Sweet, Frank Ervin, Gerhard Weiss, George Bach-Y-Rita, and Rioji Hagiwara

Methodology has been developed to stimulate and record electrical activity of the brain in unrestrained monkeys and chimpanzees. This procedure is of clinical interest because it permits exploration of the brain in patients without disturbing their rest or normal activities.

Electrode assemblies were implanted bilaterally into the anterior medial amygdala of four patients with psychomotor epilepsy. The radio stimulation system consisted of an RF transmitter and a receiver-stimulator. A miniature FM–FM amplifier-transmitter combination and a telemetry receiver were used for the EEG telemetry.

The analog output signals from the receiver were connected to the inputs of an EEG recorder and a magnetic tape recorder. A microphone was also mounted in the room with the subjects, and conversation was recorded along with the EEG on magnetic tape.

The integration of the three-channel units for radio stimulation and EEG telemetry constitutes the stimoceiver (stimulator and EEG receiver). The complete instrument, which weighs 70 g, can easily be taped onto the patient's head bandage.

Conversations with the patients were tape recorded and synchronized with the EEG recordings and moments of stimulation. During interviews with two patients, time lapse photography was used to record changes in facial expression or behavior.

The purpose was to identify sites of abnormal intracerebral electrical activity and to test brain excitability in order to guide contemplated surgery. Patterns of electrical activity were correlated with behavioral performance, and alterations of conduct evoked by brain stimulation were evaluated. Many hours of EEG recordings were analyzed to determine the frequency, severity, and propagation of spontaneous electrical discharges which could have pathological significance. Interviews were structured in order to elicit the patient's verbal expression without unduly influencing the ideological content. Tape-recorded conversations were transcribed, analyzed for number of words per minute and for ideological and emotional content, and correlated with the EEG activity recorded continuously during control periods and stimulations.

Clinical Applications

A 35-year-old white male had attacks of staring and automatisms for 10–12 years and episodes of rage during which he injured his wife and children.

The EEG showed bilateral temporal lobe abnormalities. Electrodes were implanted in both amygdalas, and depth recordings revealed abnormalities prominent on the right side. The problem was to decide if and where in the amygdala a focal destructive lesion should be made. The telemetered recording and stimulation allowed us to correlate the patient's behavior and electrical ab-

Condensed with permission from the *Journal of Nervous and Mental Disease*, 147 (4) :329–340, 1968.

normalities without the structured rigidity of the EEG recording room.

A 20-year-old white female had encephalitis at 18 months and had temporal lobe seizures and occasional grand mal seizures for 10 years. She also had frequent rage attacks which on more than a dozen occasions resulted in an assault on another person. On one occasion she inserted a knife into a stranger's myocardium, and another time a scissors into the pleural cavity of a nurse.

The EEG showed occasional temporal lobe spikes, and depth recordings revealed electrical abnormalities in both amygdala and hippocampus. The use of stimoceivers was of importance in selection of the temporal lobe site for a destructive lesion because it was difficult to confine the patient in the EEG recording room during a rage attack while recordings were easily made by telemetry.

A 14-year-old Negro girl of borderline intelligence was brought up in a foster home. Twice her behavior resulted in the death of a foster sibling, and she assaulted a child at the hospital.

The EEGs, ventriculograms, and arteriograms appeared normal, and extradural plates beneath the temporal lobes recorded normal brain waves. Depth electrodes were placed in each amygdala through the posterior approach. Recordings from the hippocampus showed marked focal electrical abnormalities.

Telerecordings and telestimulations were used because of this patient's unpredictable behavior. Stimulation in her right hippocampus produced a clinical and electrical temporal lobe seizure. The patient claimed to have had these before electrode implantation, but she had not communicated this information.

In the four patients, recording of spontaneous electrical activity showed typical patterns which permitted the identification of each linkage in different recordings, indicating the reliability of the information. The activity of each linkage indicated the existence of autochthonous electrical generators rather than the predominance of widespread pacemakers.

One objective in telemetric recording of intracerebral activity is the search for correlations between electrical patterns and behavioral manifestations. Computer analysis of the tape-recorded information is the best method for this purpose. Visual inspection of ink-writing recording may also give valuable data.

The combination of both stimulation and EEG recording by radio telemetry offers a new tool for two-way clinical exploration of the brain. It may be predicted that in the near future microminiaturization and more refined methodology will permit the construction of instruments without batteries and small enough to be permanently implanted underneath the patient's skin for transdermal reception and transmission of signals through several channels. While the use of cardiac pacemakers is well established in clinical medicine, methodological problems in the development of a similar instrument for cerebral pacemaking are far more difficult because of the requirements of multichanneling, external control of several parameters of stimulation, and the functional complexity of the brain. These technical problems are soluble, and the possibility of clinical application should attract the interest of more electronic and medical investigators.

Psychological Stresses of the Presidency

MILTON GREENBLATT

A valuable contribution by psychiatrists and psychologists to the field of politics would be the study and management of stresses on the President and other public officials, for through them flow critical decisions shaping our lives and responsibility for moral and spiritual leadership. The potential for doing good at these critical points in our social organization is great, yet little systematic study has been carried out. We have mainly anecdotal material.

A high-level administrative office is not a job for a man who does not like hard work and long hours, who needs to dominate his time rather than be dominated by the demands of his position. It is not a job for one who has anxiety in the face of decisions or crises, who likes to be a spectator, or, who likes to be a player on the team rather than the leader. It is a job for one with a large reservoir of aggression, who glories in the challenge, and who enjoys knocking over the opposition by any means allowable within the rules of the game. He can rarely afford to be emotionally over involved in any issue for long. The President cannot afford any neurotic "hang-ups."

It is a job for a man who likes to work with people and a team, for a man who not only can stand the loneliness of decision, but who seeks the solitary hours necessary to get his thinking done.

Ideally, the Chief Executive is a man who can absorb large amounts of data and integrate them, yet know his limitations. He understands much about other men intuitively. Always, he respects their talents and their needs.

He is integrated, energetic, ambitious, but a man whose ambitions do not impair good judgment or destroy the faith of his followers. He is likeable, and can achieve a reputation for integrity and credibility. He can take criticism, and accept philosophically wrong interpretations of his activities and motivation, even vilification of his name and threats to his person.

What then are the stresses upon the presidency?

First is that we require all these virtues, which no one has in sufficient abundance. We desire the perfect father, the embodiment of our youthful aspirations, prophet, protector, great healer of our psychological and social ills. No public relations build-up can produce this paragon.

A second stress is over-load—intellectual, physical, and spiritual. Peak performance is expected at all times. There inevitably must come the physical and intellectual slump, the periods of illness that make the daily tasks depleting, when even the President may wonder if he has slipped too far.

A third stress is his perpetual centrality in all events. He presides over or dominates everything; in short, he becomes a public property. Apart from the high level of alertness required—which in itself is a chronic

Condensed with permission from *Psychiatric Opinion*, 5 (5) :5–7, 1968.

stress—his centrality creates a false sense of his own status, which requires constant correction and balance in order to maintain proper perspective. The President at all times must be the most realistic of all realists.

There is the gnawing urgency and gravity of the current situation. Extinguishing conflagrations or promulgating programs is apt to create a sense of urgency or cause him to "run scared," emotional situations which can be dangerously eroding.

Next are the deeply personal threats. The job carries a risk of assassination or premature death from physical breakdowns. He must live with the possibility of imminent death and its consequences to his program, his family, and his place in history.

There is a constant problem of fulfilling his multiple roles, including those of husband, father, and lover in his family of procreation, and of sibling, son, and relative in his family of origination. The President needs love and attention in the most basic sense; he must perform his roles as husband and father or his wife and children suffer. A man must live as a man even though—or, perhaps, especially because—he is a President or a king. The state of his morale literally can affect the world.

Finally, the President moves inexorably to the end of his time as President. From the beginning of his term, and increasingly with the passage of time, he knows that this is his last opportunity to contribute to public welfare as a man with real power! He is soon to be assigned the role of senior statesman, of has-been, whose mistakes and accomplishments will be dissected and exposed for all of history. And, like the common citizen, the Chief Executive once retired must learn how to dial his own phone, with his own hand.

An Experience in Submarine Psychiatry

JONATHAN L. SERXNER

This report is based on a year-long tour of duty in a crew of a fleet ballistic missile submarine (FBM). The psychological and psychiatric problems on these patrols develop within a distinctive physical and organizational setting. This setting is defined by the design of the FBMs, the "two-crew concept" of operation, and the selection and training of personnel.

Condensed with permission from the *American Journal of Psychiatry*, 125 (1): 63–68, 1968.

Each vessel carries 16 missiles with the mission of acting as a deterrent to nuclear attack on the U.S. No individual can initiate launching without the aid of others. All on board are impressed with the terrible destructiveness of these weapons.

Every FBM has two crews of 12–15 officers and 100–130 enlisted men. Each follows the same operational cycle of about 24 weeks. The fresh crew relieves the returning crew after the submarine gets in and takes the ship to refit it for patrol.

After refit, there is the patrol of about 60 days during which the submarine is continuously submerged.

Submarine personnel are an elite group: they have met rigorous physical and mental standards, have undergone special training, and receive additional pay. All submariners are volunteers. When the demand for personnel is great, it may be filled by taking those who indicate that such duty is their sixth choice (out of six).

Some personnel come directly from training and some from other submarine duty. All submariners have had eight weeks (enlisted) or six months (officer) of submarine training prior to reporting for duty.

The first stress in the on-crew cycle is leaving one's family. The result is perhaps felt more by the wives; it is an impression of medical officers that a period of increased illness begins when the father leaves for his submarine. News of illness at home reaches the submariner during the month of refit; the staff in the home port work to mitigate the conditions generating stress at this time. The refit period can be stressful if a complicated, delicate piece of apparatus needs repair and testing in the limited time available before patrol. Men sacrifice sleep and shore leave for days on end to "get the job done."

Officers and men feel there is a primary threat about these long patrols, and sense this on the level of being able to "pass the time" until the end of the patrol. Concern with this issue finds a direct, almost universal expression, of "counting the days."

Passing the time is accomplished with the aid of a broad program of activity. Everyone works, usually with members of his department or division (6 to 18 men).

An important group of activities is based on qualification programs (to become "submarine qualified" and to be authorized to stand various watches). Officers and men study manuals, teach one another informally, and present themselves to certifying boards composed of qualified shipmates. There are formal lectures, some obligatory and some voluntary, departmental lectures, "advancement in rate" lectures, and group study course meetings.

A recreation committee organizes activities such as casino nights. Certain men take it upon themselves to be entertainers or to "raise the morale" of their watch section (or of the whole crew), often through highly imaginative joking. There is a different full-length film every day; wire service news releases are available, and there is a 1,000-volume library. Lay leaders conduct weekly religious services. The inevitable card games occur.

The food is excellent and a favorite topic of conversation; meals are social events, and, curiously, reducing is a popular activity.

Inactivity per se does not seem to be an important stress; lack of opportunity to work on specific personal problems *is* a major stress. The other major stress is separation from family. A man on patrol may receive three messages from his family, but cannot send any.

Sexual interest finds expression in several ways. Pin-up pictures are found from a few days after the patrol begins until its end. There is a tendency after two to three weeks to display pictures of grossly unattractive women (apparently a sort of "sour grapes" rationale). There seems to be a low incidence of obscene literature. Sexual activi-

ty is a frequent topic of conversation. This topic, and vulgar language as well, reaches a peak toward the middle of the patrol. This talk does not seem to indicate anticipation of resuming marital relations, but beginning a few weeks before the end of the patrol this anticipation appears with increasing frequency. There is an increase in physical contact—back-slapping, collisions, etc.—in the last 7–10 days of the patrol. The last week or so is also the time in which "channel fever" appears. This is a state of excitement, occasionally with absent-mindedness.

The inevitable personality conflicts and the proximity enforced by working, messing, and berthing conditions generate some resentment and there usually are a few altercations. The well-ingrained military sense of hierarchy holds these down; there is always somewhere else to go and someone to give a sympathetic hearing to one's complaints. A frequent means of releasing hostility is to have hyperbolic, "joking" insulting matches between individuals or "feuds" between small groups.

Five percent of the crew of 125 men and 12 officers were treated for psychological or psychiatric problems of varying degrees. Minor anxiety reactions constituted the most frequent group. These reactions presented as distractedness or low-grade anxiety attacks, or more frequently they were manifested by insomnia, headaches, or other somatic concerns. The precipitating situation was usually one in which the man was to undertake a major project—e.g., marriage, divorce, or a long-distance move to start at a school—shortly after the patrol ended.

Depressive reactions were seen in several instances; anorexia with weight loss was noted in two cases. Unsatisfied dependency needs in individuals strongly attached to their families seemed to be the common element in the depressions. For the anxiety and depressive reactions the treatment was minor anti-anxiety agents, antidepressants, and hypnotics, along with support.

In the course of two patrols, one incapacitating psychiatric illness occurred. A chief petty officer had an acute paranoid schizophrenic break. A bright, highly motivated man, a qualified technical specialist with no submarine experience, he had spent many of his 17 years in the Navy in instructor duty and other shore activities, and with his family. Although he had migraine headaches for 12 years, they had been quiescent for the preceding two years.

There was the problem of integrating himself and other new men with the old hands. He was confused about his role. He would have preferred to have taken charge. He had not received training on his department's equipment, which fostered the practice of men bringing problems to the departmental officer rather than presenting them first to the chief, according to standard Navy procedures.

Almost immediately the chief's headaches recurred, as he revealed later. At the end of the fifth week, erratic behavior and grossly irrational talk were noted. He "heard" voices talking about him and calling him names. A primary delusion was that his departmental officer was out to do him damage. He was relieved of his watch-standing duties and placed under treatment.

The treatment was dictated by the facilities, by the requirements for

the safety of the submarine, crew, and the man himself. The facilities included an ample supply of phenothiazines, barbiturates, etc., and a straight-jacket, but no sick bay in which a man could be secluded.

What was done was to have the 15 other chiefs (with whom he berthed) rotate through watches around the clock with him, in addition to standing their usual watches.

He was given phenothiazines in doses increased to 600–800 mg. a day and barbiturates in considerable doses. He was seen in frequent sessions; these were supportive and ventilatory, with some interpretation being done. His fellow chiefs moved from a surveillance role to one of involving him in activities in a way resembling that prior to his illness.

This treatment continued for three weeks, and the response was gratifying. Shortly before the end of the patrol the chief had tried standing in noisy places to drown out the remnants of the hallucinations. He felt that if he could eliminate these he might escape hospitalization and return to his family when the rest of the crew returned. When the submarine docked he was transferred to the base hospital and from there air-evacuated, via a U.S. military medical facility in Europe, to the Philadelphia Naval Hospital. After several months there, he was released for a trial of limited duty (non-submarine).

Some Psychiatric Aspects of an Arctic Survival Experiment

FREDERICK E. POPE AND TERENCE A. ROGERS

In 1967, an experiment in arctic survival was conducted by a group from the University of Hawaii with colleagues from other universities, the U.S. Air Force, and the National Aeronautics and Space Administration.

It involved 13 scientists walking on snowshoes across country for about 200 km. in central Alaska. Each man carried his own gear; the difference between nude weight and that dressed, with pack and equipment, was 40 kg. They slept in the open and, except for about 1 hour per day in a mobile laboratory, spent 10 days outdoors. They had prepackaged rations of an identical diet, but 7 men had 3800 Kcal, and 6 had 2,000 Kcal per day. Weather conditions were severe. The lowest temperature was −47°C and the temperature was below −30°C for much of the time. A wind gusting to an estimated 40 knots was encountered for one period of about 6 hours.

Only the psychiatric data are dealt with here. The preliminary psychiatric interviews were conducted at an Army base, but during the field phase the subjects were interviewed and tested under severe climatic conditions. Nevertheless, the interviews were conducted as formally as possible on 3 or 4 days, and less formally on the other days.

Each preliminary psychiatric interview consisted minimally of 18

Condensed with permission from the *Journal of Nervous and Mental Disease*, 146 (6) :433–445, 1968.

questions fitted into the interview as best suited a flow of communication.

Mean age of the participants was 35, with a range from 23 to 47. Eight were Ph.D.s and five M.D.s. Backgrounds were mixed with respect to familial stability and socioeconomic class. Four marriages were stable, but five were unhappy and the men acknowledged that escape from the domestic situation was a motivation for participation. Five had seen psychiatrists at some time and one was in therapy. Nearly all had difficulty in adolescence, particularly in the sexual and social spheres, but most had made excellent adjustments scholastically. Two who had been slow starters scholastically performed well in all aspects of the experiment and showed high leadership capability. Only one other man was evaluated as having a high leadership capability, and fortunately this was the leader of the expedition. Nearly all had great dependency needs which were unsatisfied or unresolved, but this made for cohesiveness in the group. It was estimated that the IQs clustered at the 140 level.

Impressions were that the men ran the spectrum from no apparent psychopathology, through excessive use of defense mechanisms, to moderately severe neuroses. There were no overt psychoses during the prefield phase. All but one were enthusiastic over their work and achievements; they were able to encapsulate this phase of their life from other conflicts and difficulties. We found this ability to be of the utmost significance to their performance under stress.

The factors which bothered the men most were cold, sleeping in a partially frozen sleeping bag, danger of falling through the ice, and necessity of single file marching. In soft unbroken snow a party moves best on snowshoes in single file, with the lead man relieved every few minutes. The scientific part of the experiment required a disciplined attention to detail, but no subject found this to be a major stress. Some subjects circumvented the monotony by programming their thoughts, especially in the first 3–4 days. They would think deeply about a scientific topic, related or not to the current experiment.

Where the *scientific interest* was high, the quantity and quality of motivation continued at high levels during the field phase. Where the scientific interest was low, all other motivations decreased. The scientists had more professional motivation to participate, the M.D.s had more adventurous and camaraderie motives.

Where the *self-concept* was high, especially in terms of physical fitness, stamina, and professional capability, the subject did well. Where there was insecurity and lack of professional confidence, the subject seemed to suffer sooner and more intensely from the cold, diet, and lack of physical comforts. Little or no overt hostility was noted. This self-containment of the aggressive drive was in part due to the physical demands of the experiment, but it also suggests a degree of ego strength not related to motivational factors.

The greatest *fear* was that of falling through the ice on a frozen river. Second was fear of cold injury, and third the feeling of being unable to complete the march because of exhaustion.

The greatest *frustration* arose from the bulkiness of the monitor-

ing equipment; this had not been foreseen by any of the participants. Secondly, the difficulty of falling asleep when severely fatigued and intensely cold had been very much underestimated by the group and the psychiatric monitor. Falling down in deep snow was a severe frustration because it was almost impossible to get up again unaided. This created an intense feeling of failure at the start, but toward the end when success was more or less assured, falling down became a humorous outlet.

In the field phase the group was mostly concerned with reality fears, and these seemed to offer security to some men as relief from long-standing unrealistic fears. This was not true for those who were fearful of close interpersonal contact. The men who admitted their realistic arctic fears adapted better; these were generally the same men who had less unconscious conflict with irrational fears.

Overt expressions of anger were notably lacking, with only one or two men showing poor impulse control at different times.

No one withdrew for interpersonal difficulties, but we believe that two or possibly three men would have done so if it had not been for the presence of the psychological team. One was able to interact only by provoking the wrath of others; another had to adopt a pseudo-aggressive behavior pattern because he could not cope with the close physical encounters. No cliques were formed. This group cohesiveness may be attributed in part to the intellectual stimulation and feedback of the subjects, in part to confidence in the leadership and organization and to the presence of the psychological team, which provided emotional outlets in confidence.

No fighting occurred, but the severe physical demands were hardly conducive to irrelevant physical excesses. After the march was completed a few members became aggressive, and during a group session on day 10 the subject of physical encounters was manifest in the group feeling.

Sexual desire was low throughout the active phase and for a few days afterwards. Perhaps the forces normally expressed as sexual drive were recruited to meet the added stresses. We would also suggest that relief from domestic sexual responsibilities was welcome to most of the men. A constriction of ego interest was apparent in that few expressions relating to wife and family were made by any of the men during the field phase. There was great loyalty to the leader by the group as a whole.

The 10-day march can be broken up into four periods: the last day of the prefield phase plus days 1 and 2 of the march, days 3 through 6 of the march, days 7 through 9 of the march, day 10 of the march plus days 11 and 12 of the followup phase.

On the last day before the march there was a change in the mood. Enthusiasm was dampened by a skilled arctic survival expert who acted as a guide to the party. He went into justifiable, gruesome detail on the accidents to be expected and the procedures to be followed.

The party began in good spirits but within the first hour several men were upset by the fact that the portable radios were inoperative, and that the party was isolated throughout the day. This made the hazards much more real and during the next two days the group reacted with real fear and anxiety.

questions fitted into the interview as best suited a flow of communication.

Mean age of the participants was 35, with a range from 23 to 47. Eight were Ph.D.s and five M.D.s. Backgrounds were mixed with respect to familial stability and socioeconomic class. Four marriages were stable, but five were unhappy and the men acknowledged that escape from the domestic situation was a motivation for participation. Five had seen psychiatrists at some time and one was in therapy. Nearly all had difficulty in adolescence, particularly in the sexual and social spheres, but most had made excellent adjustments scholastically. Two who had been slow starters scholastically performed well in all aspects of the experiment and showed high leadership capability. Only one other man was evaluated as having a high leadership capability, and fortunately this was the leader of the expedition. Nearly all had great dependency needs which were unsatisfied or unresolved, but this made for cohesiveness in the group. It was estimated that the IQs clustered at the 140 level.

Impressions were that the men ran the spectrum from no apparent psychopathology, through excessive use of defense mechanisms, to moderately severe neuroses. There were no overt psychoses during the prefield phase. All but one were enthusiastic over their work and achievements; they were able to encapsulate this phase of their life from other conflicts and difficulties. We found this ability to be of the utmost significance to their performance under stress.

The factors which bothered the men most were cold, sleeping in a partially frozen sleeping bag, danger of falling through the ice, and necessity of single file marching. In soft unbroken snow a party moves best on snowshoes in single file, with the lead man relieved every few minutes. The scientific part of the experiment required a disciplined attention to detail, but no subject found this to be a major stress. Some subjects circumvented the monotony by programming their thoughts, especially in the first 3–4 days. They would think deeply about a scientific topic, related or not to the current experiment.

Where the *scientific interest* was high, the quantity and quality of motivation continued at high levels during the field phase. Where the scientific interest was low, all other motivations decreased. The scientists had more professional motivation to participate, the M.D.s had more adventurous and camaraderie motives.

Where the *self-concept* was high, especially in terms of physical fitness, stamina, and professional capability, the subject did well. Where there was insecurity and lack of professional confidence, the subject seemed to suffer sooner and more intensely from the cold, diet, and lack of physical comforts. Little or no overt hostility was noted. This self-containment of the aggressive drive was in part due to the physical demands of the experiment, but it also suggests a degree of ego strength not related to motivational factors.

The greatest *fear* was that of falling through the ice on a frozen river. Second was fear of cold injury, and third the feeling of being unable to complete the march because of exhaustion.

The greatest *frustration* arose from the bulkiness of the monitor-

ing equipment; this had not been foreseen by any of the participants. Secondly, the difficulty of falling asleep when severely fatigued and intensely cold had been very much underestimated by the group and the psychiatric monitor. Falling down in deep snow was a severe frustration because it was almost impossible to get up again unaided. This created an intense feeling of failure at the start, but toward the end when success was more or less assured, falling down became a humorous outlet.

In the field phase the group was mostly concerned with reality fears, and these seemed to offer security to some men as relief from long-standing unrealistic fears. This was not true for those who were fearful of close interpersonal contact. The men who admitted their realistic arctic fears adapted better; these were generally the same men who had less unconscious conflict with irrational fears.

Overt expressions of anger were notably lacking, with only one or two men showing poor impulse control at different times.

No one withdrew for interpersonal difficulties, but we believe that two or possibly three men would have done so if it had not been for the presence of the psychological team. One was able to interact only by provoking the wrath of others; another had to adopt a pseudo-aggressive behavior pattern because he could not cope with the close physical encounters. No cliques were formed. This group cohesiveness may be attributed in part to the intellectual stimulation and feedback of the subjects, in part to confidence in the leadership and organization and to the presence of the psychological team, which provided emotional outlets in confidence.

No fighting occurred, but the severe physical demands were hardly conducive to irrelevant physical excesses. After the march was completed a few members became aggressive, and during a group session on day 10 the subject of physical encounters was manifest in the group feeling.

Sexual desire was low throughout the active phase and for a few days afterwards. Perhaps the forces normally expressed as sexual drive were recruited to meet the added stresses. We would also suggest that relief from domestic sexual responsibilities was welcome to most of the men. A constriction of ego interest was apparent in that few expressions relating to wife and family were made by any of the men during the field phase. There was great loyalty to the leader by the group as a whole.

The 10-day march can be broken up into four periods: the last day of the prefield phase plus days 1 and 2 of the march, days 3 through 6 of the march, days 7 through 9 of the march, day 10 of the march plus days 11 and 12 of the followup phase.

On the last day before the march there was a change in the mood. Enthusiasm was dampened by a skilled arctic survival expert who acted as a guide to the party. He went into justifiable, gruesome detail on the accidents to be expected and the procedures to be followed.

The party began in good spirits but within the first hour several men were upset by the fact that the portable radios were inoperative, and that the party was isolated throughout the day. This made the hazards much more real and during the next two days the group reacted with real fear and anxiety.

In days 2–6 anxiety levels were stabilized, and hostility did not appear to rise. There were many complaints but it was obvious that those in the greater psychological stress were those who were unable to complain at all. The fears voiced most were the realistic fear of being unable to continue and the unrealistic fear of being left alone. The entire party was depressed largely because of poor sleep and the anticipation of little sleep the next night in a frozen sleeping bag.

At the campfire in the evenings talk centered around science, art, cultural differences, and the experiment itself.

In days 7–9 two effects were apparent. The half-ration men became grumpy, apathy was noted especially in the taller thinner members, but the stockier, better insulated individuals now seemed to be coming out of their depression and had greater strength of purpose than in days 3–6.

At this time a man who had previously shown wide mood swings underwent a mild psychotic reaction. He showed a slight disturbance in reality testing and orientation, as well as loss of personal identity of a rather severe nature. His motor performance was dysrhythmic with increased flailing of the arms and poor efficiency on snowshoes. Emergency psychotherapy was instituted and although drugs were considered, none was given. He was able to finish the march and returned to his premorbid schizoid personality structure immediately on return to home base.

On day 8 one man received word of an unforeseen professional difficulty unrelated to the experiment, and he suffered a reactive depression with somatization. By this stage several subjects were hoping that their minor physical injuries would become severe enough to release them but none was willing to make an injury appear more severe than it was. Also at this stage a few of the subjects began to show feelings of mastery and pleasure with their achievements. A renewal of goal intention was now apparent in some members, but others were cursing their motivations for coming on the trip.

On day 10, only a few members of the party seemed to be exuberant about finishing, and the only one truly elated was the man who had the mild psychotic episode. The rest of the group showed apathy. On day 11, in the followup phase, some men regressed to patterns of behavior they had not seen in themselves for many years. These included bickering, desires to fight, loss of ability with the spoken and written word, minor arguments and an increase of profanity, which had been lacking in the field.

The psychiatric interviews gave a great deal of information on the personality structures of the participants, and these data, together with information on body type, can now be correlated with actual performance on the march. These results can contribute to information about what might be accomplished in the physical and psychological screening of scientist participants for extremely demanding missions.

We conclude that regardless of the complexity of ancillary motivations, if the scientific motivation outweighs the others, the man will perform adequately. The psychiatrist engaged in the preselection screening should gauge the participant's reality sense in anticipating his role on the mission, especially

where this differs from his usual role as a scientist.

We noted better performance from those subjects who could program themselves to ponder the scientific aspects of this or future missions while on the march.

In addition to the obvious considerations of physical fitness and strength, an interesting correlation of somatotype and psychological performance was noted. In days 4, 5 and 6, the men of pyknic body types were moderately to severely depressed but then improved steadily and complained less about the cold. The taller, wiry types maintained their good spirits through days 4, 5 and 6, but then deteriorated and showed more apathy than the pyknic types on days 7, 8 and 9. They felt the cold more intensely during this period than at any other time.

One of the most interesting aspects of the experiment was that the subjects regressed so dramatically upon completion of the march. A conclusion and recommendation is that the post-mission debriefing should proceed in two phases. One should be short and immediately upon completion of the mission, and the second phase should be deferred for as long as three days to permit participants to work through postponed regressive behavior. During this latter period, psychiatrists should be available for counsel and support.

Mental Health Problems in Antarctica

E. K. Eric Gunderson

For several years the Navy Medical Neuropsychiatric Research Unit in San Diego has studied the emotional adjustment problems of men living and working at Antarctic scientific stations.

The Antarctic is the most hostile environment inhabited by man. Research is the only significant activity; there is no commercial or economic enterprise. Approximately 35 to 40 scientists and 250–300 Navy men carry out projects at five stations.

Studies of the incidence of somatic and emotional symptoms by administration of questionnaires during the Antarctic winter were conducted during the expeditions of the International Geophysical Year (IGY) in 1957 and 1958. Symptoms pertaining to sleep disturbances, depression, and irritability increased during the winter months. Presence of these symptoms was associated with reduced motivation and with reduced group harmony.

Additional studies of symptom incidence have been conducted during the past three years. Because Antarctic living and working conditions have improved since the IGY period, it was anticipated that the incidence of symptoms might be lower. This expectation was not realized.

The five U.S. stations occupied year-round are McMurdo, Byrd, Palmer, Plateau, and South Pole. The studies were also conducted at Eights and Hallett Stations which

Condensed with permission from the *Archives of Environmental Health*, 17 (4): 558–564, 1968.

no longer operate through the winter. McMurdo, the largest station with a wintering party of about 250 men, is the major staging and supply base for Navy logistic support operations. McMurdo enjoys the advantages of a military establishment with recreational facilities, including a bowling alley and golf driving range, dispensary, dining hall, several barracks for sleeping quarters, and enlisted men's and officers' clubs. A nuclear reactor supplies power, heat, and distilled water for a small city. At the smaller stations, conditions are different. Space and physical facilities are limited, station members live and work in close proximity, and normal activities and sources of stimulation present in larger groups are not available.

Byrd Station is 885 miles from McMurdo Sound on the inland ice cap 5,000 feet above sea level. It consists of prefabricated buildings in long tunnels 40 feet deep, roofed over with steel arches overlaid with packed snow. There are facilities for seismological, meteorological, ionospheric, auroral, and radio noise research. The Station is supplied by air during the summer, and is maintained during the winter by about 18 Navy men; the wintering scientific party consists of about nine men.

Eights Station, near the base of the Antarctic Peninsula at about 1,400 feet above sea level, was a temporary camp consisting of portable buildings transported to the site by large aircraft. Living and working conditions were relatively difficult.

Hallett Station, near McMurdo, was supplied by sea and air. Buildings are on the surface, and the climate is less severe than that of Byrd, Eights, Plateau, or South Pole. Approximately 14 Navy men and scientists made up the winter party.

Palmer Station on the Antarctic Peninsula toward South America can be reached only by ship. Four Navy men and five scientists make up the complement. Because of its coastal location, biological studies are emphasized. Climatic conditions are less extreme than at other stations.

Plateau Station consists of five portable vans linked together. It accommodates four Navy personnel and four scientists who conduct studies in aurora, airglow, geomagnetism, very low frequency radio propagation, and radio climatology. It is located in an inaccessible region high on the polar plateau between the geographic south pole and Queen Maud Land at almost 12,000 feet above sea level. A temperature of −116.4°F was recorded at Plateau Station, and it is expected that temperatures may fall as low as the world's record of −126.9° F established at Russia's Vostok Station. Plateau and Vostok Stations probably share the distinction of having the most extreme environmental conditions of any inhabited spots on earth.

The South Pole Station is at the geographical south pole at approximately 9,200 feet above sea level. The mean annual temperature is 57°F and during the winter −110°F has been recorded. South Pole Station has 13 Navy men and seven scientists and meteorologists. Scientific programs are carried out in aurora, airglow, ionospheric studies, meteorology, and seismology.

During the summer months, personnel at all stations are burdened with construction, repairs, and storage of supplies for the winter ahead. These tasks demand hard work and the ability to withstand

long hours, little sleep, very cold temperatures, and, at some locations, high altitude. During the months of most severe weather and darkness, station personnel are forced indoors and activities are very limited. The most critical aspect of life at any small station is the fact that after the onset of winter there is no possibility of evacuation or of obtaining outside help. Contact with the outside is restricted to radio communication, and at times even radio communication is not possible. Because men are confined to the physical boundaries of the camp, another important feature is the lack of privacy and the impossibility of getting away from one's associates.

During the past year, emergency medical evacuations were accomplished from Byrd Station on Sept. 13 and from McMurdo on June 6. As air navigational and landing control techniques improve, the small interior stations may become more accessible during the winter months. Flights later than February and before October are uncertain and extremely hazardous.

Antarctic stations groups are composed of a variety of occupational and scientific specialists. Each station must have at least one man in each of the following specialties: medicine, radio communications, electronics or electrical repair, heavy equipment or engine operation and repair, and cooking. Other occupational specialties may be included at various stations.

Except for radiomen and meteorologists, only one specialist from each occupation is typically present. Group members usually are required to assume duties outside their occupational specialties, including a share of the general housekeeping chores.

Social and educational backgrounds of group members vary considerably, and psychological differences tend to be associated with these social background differences. In these small, closed groups certain differences tend to have adverse effects upon communication, teamwork, and accomplishment.

The chief causes of death or injury in the Antarctic have been aircraft and motor vehicle accidents, drowning, burns, exposure to cold, and falls.

During 1961–62, the number of dispensary visits by Antarctic personnel averaged about eight for each man annually. South Pole Station had the highest incidence of dispensary visits. Civilians had a slightly lower rate than Navy men.

For the entire Navy during the period 1961–62, the hospitalization rate for psychiatric disorders was approximately 1/100 each year. For all Navy personnel serving in Antarctica during the same period, the incidence of diagnosed psychiatric disorders was approximately 3/100 each year, although most of these cases probably were seen on an outpatient basis only. In summary, while the health of Antarctic personnel is generally good, the risk of injury or psychiatric difficulties is a little higher in Antarctica for Navy men than it is elsewhere.

Because the incidence of gross psychiatric disturbances is very low, such infrequent events could not provide a useful criterion for evaluating emotional adaptation to this environment. Techniques were needed which could measure the emotional responses of each individual to Antarctic station life. Two types of measures were developed. The first was a score reflecting

the "emotional stability" of each individual at each station. This measure was derived from ratings made by station leaders and evaluations made by associates. These data were gathered twice.

A second measure was obtained by a symptom questionnaire administered twice, at the beginning and end of winter. The symptoms pertained to insomnia, anxiety, depression, and irritability. Data were obtained from 10 station groups in three expeditions. The measure of symptom incidence used for comparisons was the percent of individuals reporting some degree of complaint.

Navy personnel showed higher incidences of insomnia and depression than did civilians at both times and much larger increases in both types of symptoms during the winter period. Civilian personnel showed little or no increase in sleep disturbances or depression. Navy and civilian participants did not differ appreciably in anxiety symptoms, but both groups reported moderate increases in these symptoms during the winter. Feelings of irritability or hostility were very prevalent late in the year for both groups, and both showed moderate increases in these symptoms from early to late winter. Navy personnel had more symptomatic distress than did the civilian scientists and technicians, suggesting that occupation or work role was a significant factor in determining the amount of emotional stress.

We have other data pertaining to motivational changes which point to the same conclusion: the man's job has an important bearing upon the risk of developing emotional and motivational problems. Radio communications and medical personnel appear particularly vulnerable—radio operators, because of isolation from other members of the station much of the time, and hospital corpsmen because of little demand for medical services through the long winter period.

Can emotional adjustment in Antarctica be predicted from knowledge about the individual gathered during the psychiatric screening prior to deployment to Antarctica? Age, education, years of occupational experience, marital status, region of residence, and family background, as well as personality test scores, personality ratings by psychologists and psychiatrists, and data pertaining to the individual's hobbies or recreational interests, were correlated with emotional-stability ratings and symptom measures gathered in Antarctica. The most striking aspect of the results were the differences in the relationship between screening information and emotional-adjustment measures for the different occupational groups. The psychological needs and characteristics which were predictive of good emotional adjustment for Navy men were not necessarily favorable for the civilian personnel.

Ratings by psychologists and psychiatrists on negative personality traits, such as aggressive, excitable, impulsive, and hostile, and ratings on positive traits, such as emotional control, conforming, and tactful, tended to correlate in the expected direction with emotional adjustment in Antarctica for both Navy and civilian groups.

Differences in emotional responses to the Antarctic environment probably can be attributed to changes in self-esteem and group status which are related to the perceived impor-

tance of one's job. This relationship is suggested by the fact that scores on a scale reflecting feelings of "usefulness" remained unchanged for civilian personnel over the Antarctic winter, but such scores showed a significant reduction for Navy men.

Another factor was the relative dependence of Navy men upon certain immediate rewards: approval of associates and supervisors, favorable results of promotional exams, orders to next duty station, etc. The scientists expected rewards from their research only after considerable delay. Indirect support for this notion was provided by the fact that high levels of expressed motivation prior to deployment were negatively correlated with emotional adjustment in the Antarctic for Navy men; this relationship did not hold for the civilians. Navy men with the most favorable and unrealistic expectations toward Antarctic service were most likely to be disappointed.

Similarly, Navy men expressing high achievement needs in a screening test were more prone to develop emotional difficulties than others.

Finally, there is evidence that different work roles require different personality and social characteristics. The adverse or positive effects of such personality characteristics as high achievement needs or strong affectional needs are enhanced by specific role requirements and by environmental limitations.

Psychophysiological Concomitants of Social Stress: The Effects of Conformity Pressure

RONALD M. COSTELL AND P. HERBERT LEIDERMAN

Social stress is one important stressor confronting man as a social organism. Pressure to conform in the face of discrepant information or divergent views is one of the most powerful. We have explored the psychophysiological dimension of conformity in an experimental context and contributed data pertinent to theoretical issues in social psychology and psychophysiology.

The subjects were 61 male undergraduate students. Subjects with prior exposure to social science courses and participation in psychological experiments were screened out.

When five subjects had assembled, they were brought into the experimental room and randomly assigned to numbered seats.

The seats were in parallel rows, with No. 1 and 2 in the first row, and No. 3, 4, and 5 in the second. They faced a projection screen, tape recorder, and microphone, visible from all seats. A remote-controlled projector and one-way vision glass were at the subjects' rear. For each subject, the thenar eminence of the left palm and the dorsal surface of the left forearm were cleansed and skin potential electrodes attached 20 cm. apart. Earphones were placed on each subject's head.

From this point, all instructions were played from the tape recorder

Condensed with permission from *Psychosomatic Medicine*, 30 (3): 298–310, 1968.

via the earphones. Unknown to the subjects, the recorder was playing two sets of instructions simultaneously.

The session began with the playing of instructions [here digested]:

> This study is part of a program of research to determine the kinds of responses which occur when persons experience visual stimuli and make judgments about them. We shall record your performance on a visual task while we record physiological responses as you make your judgments.
>
> It is necessary to determine a resting level for each individual. This requires that you sit quietly for about 10 minutes. Do not converse with the experimenters or with the other subjects. The entire study will take about an hour and a half.

The task was based on a series of 121 slides, each showing different sets of three rectangles. Subjects were required to judge the relative dimensions of each set. The majority-role subjects in seats 1, 2, 3, and 5 were instructed to select the rectangles intermediate in width, while the minority-role subject in seat 4 was instructed to select the rectangle intermediate in height.

The instructions went as follows:

> State your judgment of the correct rectangle by saying its letter out loud in the order of your numbers. Number 1 will begin as soon as he is ready to make his judgment and the rest will follow in order.

The first 24 trials constituted a "neutral" period, during which the task was nonconflictual. Without interruption, the neutral period was followed by a "critical" period consisting of 73 trials. For purposes of analysis, this period was subdivided into "Critical 1," consisting of the first 36 conflicting trials, and "Critical 2," consisting of the subsequent 37 conflicting trials. These periods were followed by a neutral period.

At the completion of a final rest period, a questionnaire was administered to determine the subjects' response to and expectations of the experiment, and their attitude toward the other subjects and toward conforming behavior. The minority-role subject was interviewed separately. The purpose of the experiment was explained, and subjects were allowed to view the equipment and their records. They were instructed not to communicate with fellow students about the experiment. In order to minimize any residual stress, subjects were encouraged to ask questions and express their feelings about the procedure.

It was found that eight out of 11 minority-role subjects made at least one error in the direction of the majority, with most of these errors occurring during the period, Critical 1. The absence of errors on the part of control group provides a clear indication that the errors committed by minority-role subjects were the result of group pressure rather than any aspect of the experimental task.

The minority-role subjects exhibited two patterns of behavioral response during the critical periods. One subgroup of six subjects maintained their independence throughout the critical periods, while another five subjects yielded to group pressure and conformed to the majority throughout.

The patterns of autonomic arousal distinguish subjects who remained independent from those who yielded. Moreover, the differentiation in arousal patterns was present both during and prior to the critical periods of social stress.

While both independent and yielding minority-role subjects began the task periods at equivalent levels of arousal, subjects who remained independent exhibited high-

er levels of arousal for the initial neutral period. Although this finding is suggestive of personality differences in the minority-role subjects, it also has implications for arousal-reduction effects of affiliation. If conformity is interpreted as an affiliative act, the lack of affiliative tendency demonstrated in the independence of these subjects might well have been expressed at this early phase in their higher levels of autonomic arousal.

Although relative skin potential differences were not significant for minority-role subjects during the Critical 1 period, in which the conformity pressure manipulation first becomes manifest, significant differences are demonstrated in the regression slope indices. These data clearly indicate a pattern of escalation in the autonomic arousal of independent subjects, while the yielding subjects present an habituating pattern which trends downward in the direction of the controls.

Although no differences were observed that could distinguish the minority-role groups during the final neutral period, it is noteworthy that this was the only phase in which the yielding minority subjects demonstrated a slope index of positive sign. It is possible that had this period been longer, a pattern of arousal might have been detected. One might speculate that during the phase of group pressure and social stress, whatever sense of guilt conformity might have generated was more than adequately balanced by the short-term refuge and reward of affiliation with the group. With alleviation of the social stress of conformity pressure in the final neutral period, the affiliative act of conformity no longer becomes necessary, and the yielding subject is left to ruminate over his conformity and the confrontation with the experimenter, whose instructions he has neglected to obey.

With the majority-role subjects, differing patterns of autonomic arousal were not as pronounced as with the minority-role. The patterns of significance were generated by the group of majority subjects confronting the independent minority. It would appear that the confrontation of a group with an independent minority-role subject serves to facilitate the habituation of skin potential and evoke a trend toward the lowest levels of autonomic arousal. In the context of this ineffective exercise of group pressure by the majority, two processes may account for their more rapid rate of habituation. The first is that of an affective disengagement from the situation, allowing for habituation to occur unimpeded. The second presumes that the ineffective exercise of group pressure promotes greater affiliation among the majority, and allows for more rapid arousal reduction.

This research has accomplished four things. It has developed an experimental situation in which the physiological concomitants of social stress and conformity pressure may be assessed for both majority and minority roles. It has demonstrated differences in autonomic responses between individuals who remain independent and those who yield to group pressure. It has shown that a majority is physiologically responsive to a confrontation with a dissident minority. It has indicated how social-psychological and physiological techniques may be brought to bear on issues meaningful to the study of human social behavior.

Violence, U.S.A. Riots and Crime

MARVIN E. WOLFGANG

We are faced with the questions of whether American society is more violent than earlier and whether we are more violent than other societies. I suggest that there is evidence in rebuttal to the interpretation of our society's being newly, excessively, distinctively violent.

Recall some of our history that suggests violence as severe as or worse: the Shay and Whiskey Rebellions, the slaughter and subjugation of American Indians, the Know-Nothings, the Irish-antidraft riot.

That violence is not unique to the U.S. is an assertion that needs no more than a few illustrations: the aftermath of the French Revolution, the 1843 student riots in France, assassinations in many countries, the Nazis.

The homicide rate in the U.S. is around 4–5 per 100,000. In 1933 it was twice as high. The rate for Colombia is 34; Mexico, 30; Nicaragua, 29; Guatemala, 12; Ecuador, 6—even with poorly collected statistics. The U.S. stands high compared to England and most of northern Europe. Our rate is four times as high as Canada's and Australia's.

Today we have more police, more crime statistics, more definitions of delinquency—like truancy, running away from home, being incorrigible—that include one-third of our delinquents, who are not defined as such in other countries.

Supreme Court decisions regarding appearance of suspects for hearings within 48 hours were blamed for crime waves that never existed. Violence on television is distasteful, but the link to violent behavior is unproved. And although I would prefer all guns in private hands to be turned in to public authorities and believe that lives would be saved by restrictive gun legislation, I am also aware that there are probably twice as many guns as in the 1930's, and I note a steady decline in criminal homicides since then.

The Fear of Being Victimized

There appears to be a widespread fear of being assaulted, robbed, and raped on the streets, but there is meager evidence to justify the fear. As the mass media present more information more rapidly about a phenomenon to more consumers over wider areas, these consumers assume that the frequency of the phenomenon is increasing.

Official rates of crimes of violence are moderately increasing. We do not know the extent to which the rate may be affected by improved recording, more employees to tabulate and calculate statistics, increase in citizens' willingness to report crimes, and other such factors, but they may be contributing to some of the official rate increases.

Surveys conducted for the President's Commission on Law Enforcement and Administration of Justice reveal that most people are not victimized sufficiently often for crime to make a major impact on their lives. The crimes which the public seems to fear most—crimes of vio-

Condensed with permission from *Crime and Delinquency*, 14 (4) :289–305, 1968.

lence—are those which occur less frequently. We know that most crimes of violence are committed in the home; they are intra-ethnic and generally intra-group offenses. Only about 5–6 percent of rapes in the U.S. involve strangers and victim-offender relationships that are interracial.

Urban Space and Victimization Probabilities

Although the rates of increase of crime have not been alarming, the probability of being victimized may have increased because of the increase in population. The population of a neighborhood and the number of youths of crime-prone age may indeed have increased. But the spatial dimension of the neighborhood has not increased; a street intersection remains the same. The result is that the chances of a given citizen's being assaulted at that intersection have increased.

One method of urban crime control has been to cluster the lower classes in densely populated and residentially restricted areas. This style of ghetto crime control is declining as social policy mounts an attack against poverty and ghetto living. The lower socioeconomic classes are spreading throughout the city and spilling out of its boundaries.

The long-range effects of dispersion should have social benefits, but the immediate effect may be to increase crime in old sections of cities that were accustomed to low crime rates. If a democratic society opts for increased opportunities for all citizens, the transition stage must be faced and accelerated.

Crime and Riots

Criminogenic Forces of the City—The forces that generate conditions conducive to crime and riots are stronger in urban than in rural areas. Urban life is characterized by population density, spatial mobility, ethnic and class heterogeneity, reduced family functions, and anonymity. When these are combined with poverty, physical deterioration, low education, residence in industrial and commercial centers, unemployment or unskilled labor, economic dependency, marital instability or breaks, poor or absent male models for boys, overcrowding, lack of legitimate opportunities to make a better life, absence of positive anticriminal behavior patterns, higher frequency of organic diseases, and a cultural minority status of inferiority, social-psychological mechanisms leading to deviance are more likely to emerge.

Negroes are the current carriers of a ghetto tradition. More than any other group, they are recipients of urban deterioration and the social-psychological forces leading to legal deviance. When the untoward aspects of urban life are found among Italians, Germans, Poles, or any other group, their crime rates are similarly high.

This is not meant to obscure the fact that poverty exists in small towns and rural areas. But when multiplied by congested thousands and transmitted over generations, poverty becomes a culture. Children inherit a subculture of violence where aggressive responses are either expected or required.

The Crime of Riot—Crimes do not cause riots, but riots cause and are themselves crimes. Studies of riots show that "high levels of discontent" about job opportunities, housing, school integration, police behavior, and the efforts of Federal and local governments to encourage

integration characterized the feelings of the Negro population in six riot cities. Inflammatory incidents are the common precipitating factors.

A high proportion of persons arrested during riots have arrest and criminal records. Many are looters and looters are the parasitical wave who take advantage of the anomic situation. Carrying off television sets, guns, and pianos is a symbolic gesture of stealing a piece of the rewards of privilege requested by but denied to the poor.

In another sense the white society is responsible for inciting to riot. While displaying before the poor the democratic idealism of opportunity, it has inflicted prejudice, economic blockage of opportunities, subjugation, and alienation from power and participation in democracy. The urban riots thus far are a mixed bag of some confusing revolutionary ideology among a few, anomic acts expressive of social malaise among many, and adventuresome play among others.

Citizen Response

Dispersion of the Subculture of Violence—My proclivity is to disperse the subculture's members by subsidized relocation and redistribution of the population. Programs that shift the subculture from one part of the city to another do not destroy the subculture. For the subculture to be distributed so that it dissipates, the scattered units should be small.

The detached-worker programs of handling juvenile gangs must be viewed as a holding action until a "spontaneous remission" of gang members occurs through aging, marrying, or moving away. The detached-worker action is designed to introduce values from the dominant culture by bending the subculture values to parallel the former. But such action by society has been piece-meal, outnumbered, and outmaneuvered by the subculture.

The larger culture sets up its own outposts within a subculture and seeks by subversive action to undermine the subcultural values. The police are like enemy troops in alien territory. In many cases, the larger culture invaders resort to violence and use the very methods of the subculture to subdue it. This reinforces and provides subcultural justification for violence.

To be most effective the system of the larger culture must be presented as a clear, if not codified, statement. To reconvert, retrain, reform may require exaggeration of the value system, i.e., a presentation of an ideal and idealized type.

The cultural value of nonviolence would be transmitted by patterns of residential propinquity to families, schools, and peers that contain few and muted expressions of violence in child rearing, marital life, playground activities, and other dramas of personal interaction; the resocialization process would take place in the subtleties of daily social life.

When the families from the subculture of violence have been distributed and absorbed by the surrounding middle-class milieu, they will become conditioned to the behavior expectations around them. The transplanted families could see, not images of middle-class conformity and life style from mass media projections, but neighbors with whom they could interact.

There may be concern that the middle-class value system requires overconformity, is "bourgeois," produces neurotics, and is overly supplied with mediocrity and banality.

But what are the alternatives to which our decision makers would have criminal deviants resocialized?

Response to Riot—Citizens respond to riots in ways that reflect their backgrounds and status. With our cultural pluralism, ethnic heterogeneity, and class clusters, not to mention personality variations, it is dangerous to generalize.

Crash programs of coalition groups are necessary. Business leaders, community organization workers, fellowship commissions, local government, and other civic leaders must do more than talk to themselves. The dialogue between haves and have-nots has begun, and if the former do not pay attention to the latter, violence that can end only in violent repression will be the outcome.

When the police curtail disorder and function with propriety, citizens should be supportive. Those who enter a riot are forsaking all other alternatives of resolution. If a government or university offers no procedural alternatives, it has itself contributed to its own victimization. If the white middle class turns its homes into armed fortresses, it is contributing to the climate of challenge and fear.

The quiet mainstreet of America, daily routines of breakfast, dishwashing, parent-child play and learning are not dramatic incidents but they form the life style of most of us.

I am not persuaded that our society is morally decayed. The idiosyncrasies of disturbed minds and dreadful tragedies do not make a pattern of culture. In moments of calm and conformity we need to remind ourselves of our deficiencies, faulty democracy, fallacies of justice and decisions. In moments of tragedy and violence we need to remind ourselves of our continued determination to protect the harmony history has carved for us from chaos.

Psychosocial Factors in Riots—Old and New

JOHN P. SPIEGEL

Three types of collective violence are of concern: the violence of whites against blacks, violence of blacks against whites, and violence of police and other law-enforcement personnel against those who are demonstrating or protesting.

Whites Against Blacks

The rate of collective violence of whites against blacks has been diminishing, but it still occurs. On January 8, 1967, in Brazelton, Ga., two black men were refused service at a white-owned restaurant, and 25 white men jumped the blacks as they left the restaurant and beat them. One was badly injured. In Chicago on May 30, 1967, a crowd of 100 white youths attacked a smaller group of blacks in a park. In Salt Lake City on July 2, 1967, at a dance, male African students were dancing with white female Peace Corps workers. A crowd of 100 white males attacked the stu-

Condensed with permission from the *American Journal of Psychiatry*, 125 (3): 37–41, 1968.

dents and some were severely beaten.

Blacks Against Whites

This has been the most frequently reported. Of 164 episodes examined by the President's Commission on Civil Disorders for the year 1967, eight were classified as "major," 33 as "serious," and 123 as "minor." The Riot Data Clearinghouse at the Lemberg Center for the Study of Violence at Brandeis recorded 43 incidents of collective violence for the first three months of 1968, and in April there were approximately 125 episodes after the assassination of Martin Luther King, Jr. The violence of whites against blacks is primarily against persons, secondarily against property. The violence of blacks against whites is directed primarily toward symbolic objects: white-owned property and small white business establishments in the ghetto. Attacks on persons are less frequent.

Violence by Law-Enforcement Personnel

The so-called "legitimate" violence of local and State police and of the National Guard has been centered mainly on black people, college student demonstrators, and youthful protesters of all types. The term "police brutality" does not accurately describe this behavior. For example, in Boston on June 2, 1967, the police roughed up a group of black female protesters in the welfare station in Roxbury, then beat and clubbed black residents gathering in the street, including a number of ghetto leaders who were trying to persuade the crowd to disperse.

In Dayton, Ohio, on September 17, 1967, in the course of a Shriner's convention, two plain-clothes officers, dressed in Shriner's costumes, saw a black man get out of a car a half-block away with what they thought was a gun. They ordered him to halt. He took fright and rapidly walked away. They shot and killed him. When they overtook the dying man, they found that the "gun" was a pipe-case.

Since law enforcement officers are members of professional organizations, their violence has, in some quarters, been considered as particularly deviant or requiring a different order of explanation. But it is a tenable proposition that collective violence is responsive to the same set of underlying factors, no matter what group manifests the behavior.

Definition of Collective Violence

Let us define collective violence as behavior exhibited by three or more people acting in concert, characterized by extremely destructive physical aggression directed toward persons, objects, or organizations. A necessary feature is its explosiveness.

Though less rational than collective aggression, collective violence is not random but is released under specific conditons. In the present undeveloped stage of research, it is not possible to present a complete, reliable list of these conditons. However, it would appear that violence is released when the group of individuals are in a state of angry excitation due to: insult or injury to a group member or to the group as a whole, a threat of loss of social status for the group of which the insult or injury is a concrete manifestation, and/or a severe frustration of the group's desire for higher social status of which the insult or injury is seen as a concrete representation.

Origins of Contemporary Collective Violence

What are the social strains underlying collective violence? The President's Commission on Civil Disorder proposed a formula which they labelled "white racism." While it has merit insofar as it draws attention of whites to a problem they prefer to ignore, there are a number of objections. It is too vague, too accusatory, and too narrow.

The chief social strain in the U.S. has been the incompatibility between its democratic ideals and its authoritarian practices. The rights of man, the equality among peoples, and the principle of representative government have from the birth of our country been pitted against an underlying and inarticulate authoritarianism that the American Revolution was presumed to have overthrown. Because our democratic principles have been well advertised, while our authoritarian practices have received little attention, this fatal flaw in our national life has frequently generated civil disorder. As in personality processes, an unattended or hidden conflict cannot be resolved until it breaks through to conscious and open struggle.

Authoritarianism has been maintained in two ways: by the principle of exclusion of social groups from the democratic process and by the operation of pyramidal bureaucratic structures with power centered at the top.

Limitations of Democracy

At the time of its formation, the American system of democracy was limited by six principles of inclusion and exclusion. To be admitted one had to be: white; Anglo-Saxon or some closely related background; Protestant; a member of the middle or upper classes; male; and adult.

From the beginning, these principles were under attack by those who wanted to broaden them and by those who wanted to narrow them or get rid of them altogether.

Over time the "reconstructivists," those seeking to broaden the principles of inclusion, have generally overcome the resistance of the "nativists" seeking to prevent change or to turn back to the earliest and narrowest exclusionary principles. Still, the reconstructivists have succeeded merely in winning partial victories without resolving the underlying conflict.

Reconstructivists have drawn recruits from the group most likely to succeed in breaking through the elitist barrier. These efforts have been protracted and bloody. Reconstructivists have also advocated new ideas and ideologies and sought to enrich American cultural forms with artistic, musical, and linguistic practices drawn from their indigenous culture. Most importantly, when reconstructivist protest breaks into violence, the attacks are directed primarily against impersonal targets. The aim is to disrupt established law and order but not to injure or kill people.

Nativists draw recruits from groups most threatened by the wave of reconstruction. They perceive reconstructivists as an alien force, debilitating or corrupting the American way of life, or determined to destroy it. When fantasies of this nature are placed into action, the violence is aimed at persons. Their aim is to intimidate the reconstructivists, to make them go away, and stop pressing for change.

While the nativists have been unsuccessful in particular struggles, nativism as a social-psychological process has persisted. As soon as the Irish Catholics and other ethnic groups penetrated the democratic barrier, they became nativists. Now that labor has won its battle, union members in particular and the working class in general are among the most vigorous nativists where the black and youth rebellions are concerned.

It is not possible to give a satisfactory account of this conversion from reconstructivist to nativist orientation. The question requires empirical research before it can be answered with assurance.

A general theory of collective violence ought to be able to account for all forms of civil disorder. The violence of whites against blacks and of blacks against whites now falls into the general struggles between nativists and reconstructivists, as does the rising protest of youth of all colors. But what about police violence? Where does this behavior fit into the theory?

Law enforcement agencies are identified with the nativist orientation for a number of reasons. They are sworn to uphold the existing establishment of law and order. Perhaps most importantly, the police are recruited from the most recently arrived ethnic and religious groups—those who are most highly involved in the conversion process. To the Irish, Italian, or Polish police officer of working class background, black-skinned activists and long-haired youthful protestors are the embodiment of everything that is alien, evil, and destructive of the American social system. They become nonpersons and deserving of intense attack, as one would attack a rattlesnake.

A Theory and A First Step

If a theory is logically constructed, it should suggest some way of dealing with the empirical phenomenon. The theory will encounter difficulties due to the American attitude toward violence. Although violence has occurred throughout our history and is portrayed in the public media, we keep saying that we will not tolerate it. Since we obviously *do* tolerate it, the phrase represents ritual reassurance that we regard it as some aberration or affliction, rather than as something we enjoy, which is closer to the truth.

A more realistic assessment would state that we are, within limits, more willing to settle for violence than to attend to the social conflicts which generate it, just as many persons are willing to settle for their neurotic reactions rather than undergo the experience of resolving their emotional conflicts.

If this theory is correct, the country will tolerate endemic collective violence or it will make a serious attempt to resolve the conflict between democracy and a privileged or indifferent paternalism.

The first step consists, as in individual psychotherapy, in speaking out in the name of reality. The conflict that exists must be acknowledged, particularly by the elite, safely (or dangerously?) ensconced on their island. Once acknowledged, the conflict can be approached more realistically through attempts to share power with the excluded groups. To the degree that these attempts are successful, we can expect collective violence to be reduced. The continuance of collective violence will be the measure of failure to resolve underlying social conflict.

Alienation and the Individual

PEARL KING

The concept of alienation has been used in sociology, economic history, psychiatry, philosophy, and literature. It has become a "with-it" way of talking about "not being with-it."

Some writers have interpreted alienation as a state of separation, enforced by economic, political or cultural pressures which demand conformity without involvement and a disregard of personal needs. Others have emphasized the malaise that results from this situation, laying stress on the value content of the culture as the cause of alienation. And others have focused on the failure to overcome the conflict between the demands of the external world and the inner core of the self. They associate states of alienation with faulty internalization, i.e., internalization attended by ineffective defense mechanisms or incomplete resolution of conflicts.

History of the Concept

The concept can be found all through history. Homer writes of the "social alien"—the tribeless, lawless, heartless one, doomed to work his way through the desolate regions beyond the fires of clan and kin. Plato describes the "psychological alien" when he discusses people watching the wall of the cave, on to which are projected the shadows of those who pass by the mouth of the cave. It never occurs to these cave-dwellers that there is any reality other than that which they actually perceive, or that what they see would change if they turned around.

In 1482, according to the Oxford English Dictionary, alienation was used to denote "loss or derangement of mental faculties or insanity." During the 19th century, the study and treatment of mental diseases was referred to as "alienism," and, an "alienist" was a person who treated mental diseases.

Contribution of the Existentialists

The existentialists have influenced thinking on this subject. They stress the need to start from the experiential knowledge of the individual rather than from a system of concepts or abstract categories, etc. From this follows the importance of studying the individual in his situation and his feelings, perceptions, cognitive set, and behavior in relation to that situation. The situation is not so much a point in historical time as the "human situation" with its "ontological insecurity" arising from the "human predicament." They link with this the ultimate aloneness of each individual; their concept of the self emphasizes the importance of choice, responsibility, self-creation, and autonomy.

They stress the discrepancy between aspirations and the limitations of achievement, the perception of which often gives rise to a sense of alienation from what one could have become or from what one really is.

Condensed with permission from the *British Journal of Social and Clinical Psychology*, 7 (2) :81–92, 1968.

They also stress the importance of the concept of identity (essence, being, existence) and the experience of identity as the sine qua non of human nature. The authentic person is one who transcends not only himself, but also his culture. He becomes more a member of his species (mankind) and less a member of his local group, and thus not imprisoned by the norms and value systems of that group. The individual who has failed to develop into an authentic person is alienated both from himself and from his human heritage.

Related Concepts

Concepts such as "self," "ego," and "identity" are related to alienation and are employed in attempts to define or discuss alienation phenomena. One comes across terms like "ego-ideal," "self-representation," "ideal-self," "ego-identity," "self-identity," "body-self," "role-image" and "self-image," etc. These terms need careful study in the context of considering a concept like alienation.

Approaches to the Study of Alienation

The frames of reference which different writers use can be looked at in terms of the etiology of the condition, effects of alienation on the individual, and solutions to the problem of alienation.

From the etiological frame of reference, the approaches can be grouped into four categories:

Alienation is the faulty organization of society, particularly of western society and culture, where the individual is seen as its victim.

Alienation arises from the dilemma posed by the human situation, and failure to cope with the discrepancy between the actual and the potential.

Alienation arises from misinterpreted interpersonal relations as a result of "double-binds" in interpersonal communication and from "faulty spirals of reciprocal perceptions."

Alienation arises from a failure in reciprocal-connectedness between the child and its setting (e.g., within the mother-child or the father-child relationship, etc.) at the appropriate developmental phase, leading to impoverishment of the ego, a distortion of the personality, and a loss of any feeling of identity or of the self.

Another approach, in psychological terms, has been to see it from two standpoints. The first is alienation of the self from the self as an intrapsychic phenomenon, and the second is as the alienation of the self from others (or others from the self) as an interpersonal phenomenon.

Alienation of the Self from the Self

The individual has, as it were, two selves, i.e., a "true-self" which he identifies with and a "false-self" which he operates from, and which may be described as a compliant or placating self, a caretaking self, an unembodied self, or a false-self system.

The true self is that part of the self that contains the inherited potential of the individual. It appears as soon as there is any mental organization in the individual, and at the beginning means little more than the summation of the sensori-motor aliveness of the baby. The true self comes from the aliveness of the body tissues and the working of the body functions, and is linked with the idea of primary processes and primary experiences, not re-active ones.

The false self adapts or alters itself in response to environmental pressures, but the individual retains awareness of the "not-me" quality of this compliance. In clinical work one comes across all degrees of this process. In normal individuals the false self can be described as a social attitude. Thus only the true self can be analyzed, as the false self is an internalized environment, unlinked with what is felt to be the core of the person. The defenses, in these cases, are like a facade of a building unlinked to the building itself. These defenses may be massive and can be carried out with considerable social success.

If one considers the alienation of the self from the self in terms of the false and true self, it could have many implications for both diagnosis and treatment of certain types of individuals. It could provide hypotheses in exploring why some individuals are unable to make use of their culture and the process of socialization, and become unable to relate creatively to others either in relationships or in social institutions.

Alienation of the Self from Others

In the course of development, the individual goes through a series of critical phases, as he passes from one stage to another in the process of growth and maturation. At each phase one can think of the child with his specific needs "cog-wheeling" into the appropriate representatives of the "others," i.e., the parents, family, school work, government, the "establishment" and various social institutions. In some societies "rites of passage" are provided that assist in the separation from the previous stage and pave the way for integration into the next stage.

In this process of development one problem that faces the individual is how to retain sufficient contact with himself and his own integrity to avoid becoming a pawn in the social system, alienated from his own true values or his own authentic experience.

As social psychologists, we should be aware of the pressures and biases, the conditioning and the prejudices that are imposed on any individual in any cultural setting. We are in a more fortunate situation if we have had to study an alien culture and then, having that as a vantage point from which to see our own culture, we can assess how much our own value systems are blinding us to aspects of the problems we are studying.

I would like to pose some questions about the concept of alienation which may encourage social psychologists to do work in this area. We have to remember that this concept has not got much further than being a useful, unverified hypothesis. We know that a state of estrangement develops when certain people are in certain situations, but little empirical work has been carried out.

What are the individuals feeling when they are described as alienated? Why do some people suffer from it while others, in overtly similar situations, do not appear to? How widespread is it? Are the pressures and values of western culture and civilization such that most people are alienated in terms of what their potential as human beings might permit? Does its incidence vary in different classes and subgroups of the population, or be-

tween one type of culture and another? If we take alienation as a dependent variable, with what socioeconomic factors is it most highly correlated; or, considering it as an independent variable, what effect does it have on behavior in various areas of life?

Alienated Youth

WILLIAM NEAL BROWN

One problem of contemporary society is the many people who do not find a place in the mainstream of living. Many are between the ages of 16–21, and can be categorized as alienated youth who are unable to make the adaptations to ensure survival in a complex, competitive social order. Caught in this maelstrom, these young people are nonplused, frustrated, and embittered; they give up, and move to another world—their own stream, or rivulet, or cesspool.

Who are alienated? They are the underachievers in education, the underemployed in industry, the school dropouts, the unemployed, and the adjudicated delinquents.

We are faced with a problem of considerable proportion in educational underachievement. Part of the cause seems to lie in the school organization, but a substantial cause relates to values evolving from the "adolescent culture." For most students, social activities, sports, dates, and cars take precedence over intellectual activities.

Why do some emerge from the adolescent culture and move into adult adjustment whereas others become alienated? The answer hinges on two factors: the adolescent value system and the social and economic supports available to the underachiever. Where underachievement is related primarily to the adolescent value system, the individual can recoup. Where both factors are involved, the obstacles to readjustment become insurmountable; this is often the case with the lower-class child. The problems of unemployment and underemployment are related to the educational problems of underachievement and dropping out of school.

In my view, there are five pressures that make for alienation in youth: the trend toward urbanization, the egalitarian thrust, the drive to "succeed," the concept of "fit," and the absence of "caring."

The *trend toward urbanization* is a factor in alienation within the context of the city as a place of complex, decentralized, and depersonalized living. Work, as the primary source of contact in this society, becomes a key determinant of satisfaction. If it is increasingly difficult to provide work for all who can work, then many people are left with no access to a basic source of life satisfaction.

The struggle of the Negro today is but a small bubble in a boiling cauldron of worldwide *egalitarian unrest.* Today's children ask the

Condensed with permission from *Mental Hygiene,* 52 (3) :330–336, 1968.

same questions that children have always asked: Who am I, and why? Who are "they," and why? The inability of adults to find answers consonant with changed life conditions results in disorganization within the community, including the public school system. The disparity between our behavior and the idealized abstractions we espouse and the schools must teach creates an insidious pressure on the growing child.

How can one define the *drive toward success* as a factor in alienation? Success is measured by financial stability and the acquisition of material goods. Education is one primary avenue by which people enhance their economic position and chances of movement up the social scale. Competition has implications, often negative, for the person who does not want to compete, or, who has areas of strength that fit the rules of another game but do not mesh with the expectations of the system. Unless the school looks for such areas of strength and attempts to build on them, the child fails but does not understand why. It is a short step from this point to frustration, and the child is well on the road to alienation.

The *concept of "fit"* is emerging in social psychology. For the urban machine to move in its accustomed ways, people are expected to "manage," "get along." Failure to do so is viewed as deviance. "Deviance" has been used to encompass the indigent, mentally ill, adult and juvenile offenders, truants, and school dropouts. This concept of "fit" and the need for it is quite functional, but is an added pressure for the person who must grow up within the system. This is especially true when the child must balance his "fit" against the unclear, ambivalent, and often contradictory expectations of the adult world.

The final factor has been designated the *absence of caring*. We have screened out the capacity or the inclination to care. Doing is very important: achieving has our highest priority. Absence of caring is caused as much by structure as by intent and by the nature of the parent role in an urban society. Father becomes a hazy image—for the lower-class child, someone working overtime to make ends meet; for the middle- and upper-class child, someone who does something supposedly important, "goes to business," leaves early and returns late, fatigued and irritable, and has another meeting to occupy his evening. The role of the mother also has changed, especially in a mother's decision to work.

What are the results of alienation? There are no statistical analyses of normative behavior in relation to alienation. They would be difficult to accomplish, for the alienated are largely invisible, "hidden" in the matrix of the society. The terms most commonly used to describe them are "apathy," "frustration," and "aggression."

One reason we don't notice the poor is that over 8 million of them are under 18 years of age. It is no accident that 90 percent of the inmates of our correctional institutions are nonwhite. These are the most alienated people.

The results of alienation are mostly poverty, delinquency, and illness. Alienation thwarts productivity, demeans the sense of self, and renders the individual an undue burden to his society.

Dream Time and Real Time

DAVID KOULACK

In 1861, Maury reported a lengthy dream that took place in Paris during the Reign of Terror. He witnessed a number of murders, was brought to trial, and condemned to be guillotined. He climbed up to the scaffold, and felt the blade of the guillotine separate his head from his body. He woke in extreme anxiety to find that the top of his bed had fallen and struck him on the neck just the way the blade of the guillotine would have struck. He concluded that the length of dreams in real time is extremely short, with many events being telescoped into brief intervals.

Recent work suggests that there may be a relation between the length of dream and of real time spent dreaming. A philosophical argument has been raised concerning this relationship. Since the dreamer and observer have only the dreamer's account of the experience, there is no basis for making a judgment about the actual time of occurrence or duration of the experience. Our experiment was designed to supply both the dreamer and the observer with a common reference point in real time.

Ten adult males, age 20–40 years, were subjects. They slept in an air-conditioned, sound-proof bedroom. An adjoining laboratory contained an 8-channel Grass EEG Model-IIID console connected to the bedroom by a bedside plugboard. A bedside telephone enabled the subjects to communicate with the laboratory.

The external stimulus was presented immediately after or 3 minutes after the first eye movement of a REM period. The stimulus consisted of six percutaneous shocks to the median nerve of the wrist presented at 2.5 second intervals at a level of intensity high enough to elicit a thumb jerk.

The subject was awakened 30 seconds or 3 minutes after the end of the stimulation. He was instructed to report immediately what had been going through his mind just prior to the awakening.

In those instances where the experimenter could identify the presence of the stimulus in the dream report and there was no evidence of concomitant waking alpha in the EEG record, the subject was asked to estimate if that event had occurred more nearly 30 seconds before the buzzer or more nearly 3 minutes before the buzzer.

There were 12 instances obtained from five of the subjects where the presence of the stimulus in the dream could be identified clearly; 92 percent of judgments placed those incidents at a time corresponding to the time of stimulation.

This ability of the dreamer to discriminate between the time of occurrence of externally induced events in the REM-dream helps to place those events in real time. Although these discriminations are of a rather gross nature, they agree with the finding of correspondence between subjects' judgments of time spent dreaming and the length of the REM periods from which they were awakened; also, they support the notion that a relationship may exist between REM-dream time and real time.

Condensed with permission from *Psychonomic Science*, 11 (6): 202, 1968.

Anton Makarenko and the Idea of the Collective

BRUCE BAKER

Although Makarenko is rarely a topic for discussion in this country, in the Soviet Union he is widely known among educators and the general public.

What was the achievement of this man that brought him praise, damnation, and enduring recognition? First, Makarenko established and maintained two colonies at which he was able to deal with the post-revolutionary problem of the thousands of orphans and delinquents who wandered the streets, committing acts of vandalism and violence, seeking simply to survive. He was able to take ill-clad, ill-tempered, and violent individuals and transform them into "new" men and women.

There was created in the youths a spirit of exuberant engagement in the tasks of life and a zest for getting things done. Makarenko had taken disorganized chaos and made of it a productive force in the society.

More significant are his ideas of education. Makarenko developed a radical approach to education. Indeed, the harsh, somewhat militaristic characteristics of some of his techniques as well as his contempt for "progressive" education alienated him from many within the Soviet Union.

Although Makarenko's thinking was imbued with Marxist-Leninist concepts, he had made no careful study of Marxist philosophy and it seems clear that what he says about education has deep roots in his own personality, his Russian background, and what he learned in dealing with his charges.

There is a central idea in Makarenko's thinking—the idea of the "collective." This concept is not original. What is significant is the interpretation he gives to this idea, the importance which he attaches to it, and the way in which he conceives that it might be implemented through education.

The ideal society is seen by Makarenko as a network of interconnecting mutually dependent collectives, forming one unified body in which common attitudes, norms, and purposes determine the course of development. The basic problem of education becomes one of bringing each child into the collective, of developing the collective spirit and attitude, an attitude of "responsible dependence" in which he becomes responsible to the collective and dependent upon it. Only in a collective context is the individual able to realize his full potential, find a concrete meaning to his life, and achieve full happiness. At the same time he is making his maximum contribution to social progress.

It is the total binding of the thinking, concerns, and activities of each individual to the group that Makarenko believes is the ultimate goal of education. Makarenko realized that this would be possible only if he could bring before the youths a "clear purpose."

Such goals were set around productive labor. At the Gorky Colony agricultural production was required for the survival of the members; at the Dzerzhinsky Commune other commodities were required by

Condensed with permission from *Educational Theory*, 18 (3): 285–294, 1968.

the society at large. But these production goals were not final; the colonies did not exist for the sake of producing goods. Rather they were means of achieving and solidifying the collective itself.

At his colonies Makarenko developed an elaborate, often subtle, system of interlacing sources of influence through which "responsible dependence" was built up and enforced. He describes three stages through which his Gorky Colony passed. At first, to bring a semblance of order to the group of rowdies, Makarenko imposed his own will on them. "The second stage comes when first one, then two, then three and then four pupils begin to side with you, forming a group that consciously wants to maintain discipline." This stage served as a bridge between the "crowd" of individuals without definite aim or purpose and the well-knit "collective." At the third stage the collective began to make its own demands through the youngsters themselves. There had to be a thorough-going system of self-government, of both control and submission.

The one overriding demand was to obey the will of the collective. No peer groups or cliques were tolerated which had norms in conflict with the collective body. If, after a period of time, a young iconoclast was still not "coming around" or if a member violated the group code he was placed before a general meeting and asked to "stand in the middle" to account for his behavior. Usually, no accounting was forthcoming; he was subjected to an onslaught of derision by his fellow colonists. Thus the concept of morality makes sense only within the context of the collective; it can have no external source.

Makarenko admits that there were failures, those who were able to evade the collective's influence. Especially "dangerous" were the quiet ones. However, failures simply indicated that organizational techniques needed modification and improvement.

To develop a collective means at the same time to develop a new kind of person. But the "personality" to be developed is not intended to be one that is unique with each individual, but a "type" that will make the collective a single, unified whole.

Makarenko was not blind to the fact that each boy or girl in the collective was a unique person who needed to be treated as such, and this created problems in his own mind.

Here is the paradoxical situation in which Makarenko finds himself: the ideal society is a collective body, a unified system of groupings in which personalities are molded and shaped by group demands. On the other hand, Makarenko recognizes that a person does not find fulfillment if he sees himself regarded merely as an objective entity to be manipulated and programmed. Can Makarenko's system accommodate a concern for the individual as an end of intrinsic worth and not a means only? Not officially. And not if the ultimate goal of education is the achievement of the collective.

The issues that Makarenko leads us to consider are at least as old as Plato and arise in new and interesting forms at different points in history. The basic problems we are likely to find with Makarenko are the problems persistently relevant to the contemporary world.

Solving Social Problems Creatively

J. P. Guilford, Moana Hendricks, and Ralph Hoepfner

Of all problems that a person encounters, those concerned with personal interactions are among the most common. Coping with other persons—peers, superiors, or subordinates—entails tactical measures of one kind or another. New kinds of situations continually arise, and this calls for problem solving.

Solving problems of interpersonal behavior is quite different from other problem solving. Analysis of intellectual abilities has demonstrated that there are four areas of information, of which behavioral information is only one.

Perceived or concrete information is the area of *figural information.* Another area has to do with meaningful thoughts—*semantic information.* Another deals with signs or symbols, or *symbolic information. Behavioral information* is communicated directly by expressive actions. This includes what we know about the perceptions, thoughts, feelings, and intentions of individuals, often exhibited in what they do and say, by interpreting the mental and physical attitudes they assume at given moments.

The four kinds of information are like four languages, and we can be more or less skilled and creative in each. Figural information is the language of the artist (visual) and the composer (auditory). Semantic information is the language of the creative writer, scientist, and planner. The mathematician and logician deal in the language of symbols. Among those who depend more on behavioral information are salesmen, politicians, diplomats, teachers, social workers, anyone who has to influence and manage others.

This is not to say that the same person does not indulge in more than one language, but he is likely to favor one of them. In the investigation of social intelligence, which is the area of behavioral information, six abilities (behavioral-cognition abilities) have been demonstrated. We can illustrate the abilities by examples of tests designed to demonstrate them.

The six abilities are in the operational category known as "divergent production." In the process of divergent production, starting with given information, one produces a variety of other items of information. This is the most creative aspect of problem solving in general.

We recognize six divergent-production abilities on the basis of there being six kinds of items of information that may be called for. These six "products" are units, classes, relations, systems, transformations, and implications.

Ability to Generate Behavioral Units

One test is called "Expressing Mixed Emotions." One item, for example, asks the examinee to make a written list of as many different things as he can that a person might say if he were both disappointed and jealous.

Another test, "Alternate Picture Meanings," presents a drawing of a face with an ambiguous expression. The examinee lists alternate interpretations as to the psychological meaning of the expression.

Condensed with permission from the *Journal of Creative Behavior,* 2 (3) :155–164, 1968.

We have been trying out two individually administered tests in which the examinee gives expressive responses other than in writing. In one test he gives facial expressions and in the other, vocal expressions.

To elicit a vocal response, we may tell him to say "I don't believe it" in as many different ways as he can, and his responses are tape recorded. In the facial-expression test, having produced each expression that he wants to give, the examinee presses a button to snap his picture. In both cases the examinee is alone in a quiet room, where he is much less inhibited. In everyday life, much communication that is designed to influence or control others is through the more direct expressive media. The modes of expression in these two tests are therefore more lifelike.

Reclassification Abilities

The ability to reclassify information is an important form of flexibility. For example, a grape can be classified with other fruits, sources of alcohol and jelly, or with spherical objects.

"Multiple Behavioral Grouping" presents a list of statements to classify in different ways. The comments might be:

1. You get out of here
2. Are you sure
3. What a bore
4. How could you do such a thing
5. Didn't you listen to me
6. I wonder what time it is

Punctuation is omitted to give more leeway in interpreting each comment. One grouping might be comments 2, 4, and 5, which have an attitude of disbelief. In comments 1, 3, and 5 there is a feature of annoyance or anger. Comments 2, 4, and 6 indicate a questioning frame of mind.

Another test presents drawings of the face, hands, and other body parts, from which the examinee is to select small groups, each possessing common attributes as to the psychological disposition indicated. Another presents head-and-shoulders photographs of the same individual in a variety of expressions. From the total collection alternative groupings are to be made.

Behavioral Relations Abilities

The best tests contain pictures of people with some "relation" between them. "Creating Social Relations" shows drawings of two people. The examinee thinks of relations that could occur between them, in view of the combination of expressions, and proposes what one person is saying to the other.

Behavioral Systems Tests

A behavioral system may be a momentary social situation, a contemporary event, or a sequence of events. In the first case, three or more people are caught as if in a snapshot. In the latter case the time dimension becomes relevant. "Creating Social Situations" calls for several story plots, given three prescribed characters, e.g., (*A*) a fearful woman, (*B*) an angry man, and (*C*) an unhappy child. A sample response might be "*C* brings home a poor report card. *B*, his father, is angry with *C*. *A*, his mother, is afraid that *B* will hurt *C*."

Another story-production test presents a photograph of three young people in different positions and expressions, as though they were captured in the middle of a group activity. Another presents the first and last pictures of a three-picture cartoon, the middle being left blank. The examinee suggests what hap-

pened in the intermediate part, giving alternative completions, each making a different sequence of events.

Transformation Abilities

A transformation is a change of some kind, and a behavioral transformation could be a change of interpretation of a sequence of events. Readiness to produce transformations is an important kind of flexibility. The information we need to solve a problem may not exist as such in our memory store, but some other information could possibly serve the purpose well, with some alterations. Being resourceful and ready to improvise are needed assets for creative solutions.

In each problem of the "Multiple Expression Changes" test, the examinee is presented with a number of faces, all of the same sex, each with a different expression. The examinee is told of three events, for example:

A man trips a lady who is walking by
He apologizes to the lady
The lady becomes angry

The task is to select, in turn, sets of three faces for the man, one face to go with each event. The examinee might select a set composed of faces indicating that the man first looks surprised, then embarrassed, and finally angry because the lady does not accept his apology. Or, the examinee might select a set because he first thinks tripping the lady is funny, then he feels sorry, then is amused at her anger. Each set after the first requires a revision of the man's sequence of reactions and attitudes. These revisions are transformations.

Testing for Implications Abilities

In general, an implied item of information is suggested by some other item. There is often a cause-and-effect connection or some kind of connection that justifies a predicted outcome. Or there is an extrapolation from present to future events. Elaborating upon an idea or a theme is also an example of divergently produced implications.

In the test "Suggested Feelings and Actions," the examinee is given a situation as follows: "Late at night when *A* and his family are in a mountain cabin, he hears over the radio that a forest fire is raging a few miles away." The examinee is to think of emotions and actions arising from the situation. Responses might be "fear—pack up and leave; interest—tune to other radio stations; or concern—join the fire fighters." These are all relevant effects of the same cause.

Many implications are conclusions or outcomes of given situations. In "Alternate Social Solutions," a problem of a social nature is given, with the examinee to offer alternative solutions. For example, "You are on a trip with friends. They want to hunt, you want to fish. What could you do?" Possible outcomes are: Go hunting with them. Tell them to hunt while you fish. Talk them into fishing. Toss a coin to decide. Offer to cook dinner if they go fishing with you.

The predictive and anticipatory character of answers is obvious. The divergent-productive aspect is emphasized by the need to invent alternatives and to produce them in quantity.

After this analytical view of behavioral creativity, we are in a better position to suggest examples of "occupational" groups for which the abilities seem important.

Among those who need to have a fluid readiness to see different behavioral meanings in the actions and expressions of other individuals, the poker player comes to mind.

Informational classes are of value wherever there must be diagnostic conclusions. The physician diagnoses an ailment by putting it in a class of similar disorders. In the social or behavioral realm, diagnoses are made by psychiatrists, psychologists, judges, and probation officers. Through long experience with people, these officials develop categories. Putting a newcomer in a category implies the treatment that should be applied. If the judge or the probation officer suffers from the ailment that has been called "hardening of the categories," he lacks the flexibility to be free of snap judgments and preconceived biases.

Among those concerned with relations between pairs of people are marriage counselors who must take into account the attitudes and behavior of both members of a pair. A police officer may be involved with an interaction problem, and he should consider different possibilities before arresting a pair rather than letting them "fight it out."

Police officers are frequently concerned with behavioral systems. It might be a gang war, a concerted hostility against the arrest of an individual, or a riot. The social worker is often involved with family constellations and family malaise.

In a social group there are shifts in attitudes and intentions, and anyone concerned with group activity must be alert for such shifts and ready with a pocketful of possible changes of direction for the group. A teacher or group-discussion leader is in this kind of role. The playwright is constantly faced with the need for ideas of transformations as he revises his stories.

The product of implications, with its predictive feature, suggests prognosis. Anyone who prescribes treatment must consider the consequences of his verdict, and he should consider as many consequences as he can. The consequences are often of a psychological disposition—improved mental health, improved behavior, improved character. In this sense, everyone is a naive psychologist, for he anticipates future actions and dispositions of persons with whom he is concerned. Having a rich repertoire of possibilities will be most useful in coping with others.

The Real World of the Teenage Negro Mother

BEATRICE SIMCOX REINER

I should like to examine some observations made from working with a group of Negro girls who were forced to drop out of school because of pregnancy. The five girls (15–16 years old) represented a relatively stable group. None had disciplinary problems at home, school, or in the community. Four had completed two years of high school.

The girls' mothers regarded the pregnancies with sad resignation rather than blame. They shared a triple sorrow: loss of hope, sadness for the girl, and a sense of their own heavy burdens. In no family was there consideration of placing the baby for adoption.

The mothers' acceptance of the girls and babies had a tendency to crack under stress. The arguments and hurt feelings that ensued were rarely mentioned by the girl herself but were noticed by other girls who were sensitive to this situation. Sibling relationships were often tense under a cover of amiability.

Although no girls' fathers were present, their influences were important. The girls had memories or fantasies about being shown off by their fathers when they were little, and several had daydreams of visiting fathers in distant places. The extent to which the girls were looking for missing or fantasy fathers in the boys by whom they became pregnant is a matter for speculation.

The fathers of the babies were not casual acquaintances and these girls had not been promiscuous. Although the boys were interested in the babies, the girls showed no wish to marry them. These girls reflected the community feeling that it was worse to make a bad marriage than to have a baby.

Lack of physiological knowledge played its part with these girls. They complained about the sexual information they had received from mothers or sisters. It was clear the girls' own fear and denial had contributed to their failure to learn the basic facts from the childbearing women who surrounded them.

The mothers believed that the girls had "learned all the facts in school." The girls received no sex information at school except a film on venereal disease presented without discussion. All the girls thought that "pregnancy couldn't happen to me," which is also the fantasy of their white counterparts.

The lower class Negro subculture seemed to play into the girl's failure to protect herself. The family troubles that all girls had experienced—violent quarrels, separations, parental illness, and lack of money—had left emotional imprints. All five girls were handicapped in expressing or recognizing their own needs and feelings. As children, unable to control the frightening things that went on around them, the girls had learned to deny fear and anger and to resort to substitute gratifications, usually supplied by the peer group.

These girls found gratifications in the more expressive outlets offered by the community. Dancing, rock-and-roll music, sports, and conversation, as well as churches with expressive forms of religious ob-

Condensed with permission from *Child Welfare*, 67 (7): 391–396, 1968.

servances, were ready resources for them. Conversation included much of the dramatic. They had an insatiable thirst for gossip and great responsiveness to the manner of telling or the turn of phrase.

Sexual expressiveness is another aspect of this life style. The community, including the girls' mothers, encouraged this. Any girl of 12 or 13 who was not interested in boys was regarded as abnormal. For the girls, a boy friend offered a better chance to participate in the expressive life style of the community. For the boys, sexual expressiveness was especially important, since work and education provided little means for developing a valid identity.

Sexual closeness can offer temporary relief, especially for the sexually immature. For girls whose lives are so vulnerable to external frustration, sexual intercourse may be a frequent result. A similar situation is developing in white communities of all social classes, which accounts for the rapid increase in white teenage pregnancies.

The mothers provided the girls with conflicting values as well as conflicting instructions. They imparted their ambivalent view of men as unreliable and dangerous but necessary and maneuverable. They shared the widespread belief that sexual intercourse is necessary to a woman for good health. They differed widely in the amount of supervision and restrictions they imposed, but their own responsibilities made supervision inconsistent at best. The closer the family to middle-class standards, the more restrictions had surrounded the girl as she was growing up and the more shame there was about pregnancy.

Where social controls are weak, inner controls in the individual have to be strong to withstand social pressures. This is hard to achieve in the presence of models (mothers, older sisters, and friends) whose behavior has deviated from the desired standard. To a girl who is coping with new bodily feelings and adolescent questions about femininity, close proximity to a pregnant or sexually active woman is a constant erotic stimulus. There were numerous illustrations of this in the project.

Effective prevention can be neither easy nor cheap. Unless there are economic and cultural changes, social work is trying to do an impossible job in connection with illegitimacy. Some necessary changes have to do with the self-image of the teenager, which reflects the attitudes of the culture. The adolescent boy needs hope for a productive future. He needs more adolescent responsibility, indicating the community's faith in his capacities, and some better substitute for the sexual double-talk whereby our culture exposes the adolescent to pressures toward early sexual experience and then holds him responsible for the results.

A change in the outlook of the culturally deprived boy would help the girl to define her feminine role. This was illustrated in the group by wistful talk of ideal marriages in which the man would be the chief wage earner but responsibilities and pleasures would be shared equally.

Perhaps we should recognize illegitimate pregnancy as a symptom of the unresolved economic and identity problems of a period of transition. If this is so, solutions will come only gradually and in the meantime we must concern ourselves with both the outcome of pregnancy and with its prevention.

Alcohol and Drinking

A Cross-Cultural Comparison of Some Structural Characteristics of Group Drinking

MIHALY CSIKSZENTMIHALYI

Group drinking in most preliterate societies is a cultural pattern serving the goal of cementing intergroup solidarity. The drinking is integrated into festive or mourning activities performed by the whole community, or a meaningful segment thereof.

The character of group drinking was maintained quite far into the literate societies of Western Europe. In addition to the usual holidays, during the Saturnalia and Lupercalia the Romans abandoned themselves to orgies in which social distinctions were abolished and codes of behavior could be transgressed. Their view is summarized in the saying: once a year it is proper to be insane. This institutionalized period of insanity is the ancestor of the Carnival (or Fasching, Farsang, etc.).

Holidays, fairs, and festive occasions of the late Empire and the Middle Ages provided eating and drinking bouts in which all the community took part. These festivals served as the highest form of collective enjoyment and an assertion of solidarity. The advent of the Reformation saw a decline in group drinking except in some rural areas of Eastern Europe.

This kind of group drinking has become less common in literate societies. Modern man developed a pattern of moderate but repetitive group drinking in a specialized location. The inn became a center of social importance, a position still maintained by its descendants, the Mediterranean *bars*, the German *Bierstuben*, the British pub, and the U.S. saloons. The inn provided a meeting place where mixing of the segmented social strata could occur. Drinking mellowed the male population, while music, tales, and card games relaxed and united it for a few hours each day. The urban equivalent of the inn developed into the coffee-house where so much of the literature, art, and politics of 19th century Europe was created.

The most prevalent form of group drinking along the Mediterranean coast of Europe takes place in a wine shop. The shop consists of one square room containing about 12 tables large enough to accommodate 4–12 men. The arrangement encourages formation of small groups while maintaining physical integration with all the others. The group around the same table is quite permanent. The size is ideally suited for conversation and discussion that maximizes participation; it encourages card games or other forms of small group competition. It permits emergence of a social space where a man can be seen and heard by his peers and establish his unique identity.

The cafe illustrates how suited the wine shop is to the development of individuality as a result of small group interaction. Cafes are a hybrid that the French developed by

Condensed with permission from *Human Development*, 11 (3): 201–216, 1968.

crossing the aristocratic salon with the proletarian wine shop. They were the salons of the Third Estate, where the emergent middle class did its drinking. The arrangement follows that of the wine shop, except that the tables are round, which helps to focus the interaction toward a common center. No one familiar with the history of Europe will underestimate the role that cafes played in the intellectual life of the 19th century.

The second type of European drinking environment is different. The beer hall of Germany and Austria consists of a larger, darker room. The tables are long, arranged parallel to each other, and flanked by benches. The size, disposition of the tables, and acoustics encourage a surrendering of individual activity to the orderly group spirit and behavior. When a man enters a beer hall, he walks along aisles that allow limited opportunity of meeting those already there; interaction takes place serially. Of all the varieties of drinking environments considered here, the *Bierstube* most approximates the tribal atmosphere in providing a feeling of group solidarity.

The next form is that which takes place in the English pub. The salient characteristic is the long bar, along which customers drink standing up. This drinking pattern gives a valuable insight into the social relationships that evolve in the English environment. The standing man can come and go without inconveniencing anyone else, move around and meet others without being tied to a fixed interaction pattern. There are disadvantages: independence is only a step away from isolation, and the single-line arrangement fragments interaction and produces marginal group members. The mass production of bar drinking is obvious in pubs located across from factories, where hundreds of patrons are served during a few minutes.

The change that the English pub underwent in America resulted in the saloon or cocktail lounge. The salient factor is that stools have been introduced. While more comfortable, the stools deprive the patron of the advantages of the counter arrangement and emphasize its disadvantages. Instead of upright men facing one another, one sees a line of hunched-up men facing away from one another. If the room contains tables, these are separated by partitions, resulting in "booths." The atmosphere is one of isolation, passivity, and shame, well conveyed by the prevalent darkness.

In rural America, the saloon developed independently of the general store, which was the counterpart of the Mediterranean wine shop as a center of participatory interaction for the male population. In the general store one did not drink alcohol. Alcohol was served only at the saloon, and at the frontiers the saloon also offered gambling, prostitution, and violence.

As civilization overtook the frontier, the saloon abandoned its side attractions, and limited itself to liquor; but it had acquired a bad reputation, so that the drinking pattern assumed those stealthy connotations which it still maintains. The general store disappeared, leaving no institutionalized space for spontaneous community integration.

To alleviate this situation, new patterns of drinking have been developed in the U.S. but only in a small segment of the population. The cocktail party, structurally

similar to the English pub, is widely used in the upper middle classes. In saloons near universities the main activity takes place around small tables—the pattern here is similar to the wine shop. In the last few years sophisticated metropolitan society has been patronizing replicas of Continental coffee shops or English pubs. But the lounge is still the most typical drinking environment.

The four patterns do not exhaust the varieties of drinking establishments adopted by Western cultures. The Iberian *posada* and Hungarian *csarda* are types where music provides a central focus. The London clubs allow the British ruling class to sip port while discussing problems of the Commonwealth. Intermediate between places for drinking and entertainment are the cabarets, *cafe-chantants,* night clubs, etc.

How are these arrangements related to the broader cultural matrix? The answer is not obvious. The lightness and openness of the wine shop is partly a function of the climate. Other characteristics may be a result of beverage served and of its methods of production and storage. A long counter would be dysfunctional because barrels of *vin ordinaire* could not fit behind it. Beer halls need aisles to assure fast supply lines. The bar becomes a time-saving device when masses of people have to be served at the same time. Yet, group-drinking patterns are in part a reflection of cultural values. There is no functional need for a beer hall to be large, low, and dim. The pub does not need a standing counter unless one accepts the value of fast, efficient service and rapid turnover.

Group drinking is one of the most widespread institutionalized practices fulfilling integrative and pattern-maintenance functions. Its particular form in a given culture is both a result of individual needs as modified by specific cultural practices and values and a causal factor in the maintenance and transmission of the same practices and values. In its sameness and its variety, group drinking acts as one of the factors that shapes the modal personality of a given culture.

Alcohol Preference in the Rat: Reduction Following Depletion of Brain Serotonin

ROBERT D. MYERS AND WARREN L. VEALE

Microinfusions of alcohol into the cerebral ventricles of rats produce a dose-dependent preference for alcohol. This observation led to the hypothesis that metabolic systems in the limbic-forebrain structures lining the walls of the ventricles are affected by alcohol, and that the biochemical state of these systems may underlie the drinking patterns in chronic alcoholics.

To determine whether a neurochemical imbalance would trigger or suppress preference for alcohol, compounds were chronically administered that alter endogenous sub-

Condensed with permission from *Science,* 160 (No. 3835):1469–1471, 1968.

stances in the brainstem regions involved in drinking and emotional behavior.

Concentrations of monoamines were selectively lowered by either *p*-chlorophenylalanine (*p*CPA), a tryptophan hydroxylase inhibitor that depletes brain serotonin, or α-methyl-*p*-tyrosine (α*M*p*T*), which has a depletive action on brain catecholamines.

Adult male rats were divided into three groups of six each. Stable preference aversion functions for alcohol were obtained by offering water and a solution of alcohol simultaneously according to the two-choice, three-bottle, random-rotation method. Concentrations of alcohol were increased daily up to 30 percent.

Doses of α*M*p*T* at 130 mg/kg and *p*CPA at 300 mg/kg were given daily during the 11-day period to ensure maximum depletion of cerebral catecholamines and serotonin, respectively. As a control 0.9-percent saline was given at 10 ml/kg to each rat in the control group. The 11-day alcohol-preference test periods, before, during, and after administration of the drug, were separated by one day on which all rats were offered water only.

Results showed that administration of *p*CPA markedly reduced preference for alcohol. In the control group, alcohol preference increased, an effect typical of acclimation to alcohol. On the other hand, α*M*p*T* suppresses the usual increase in alcohol consumption due to acclimation during the drug period, but this effect disappeared as soon as the drug was discontinued. During treatment with *p*CPA, however, the preference for alcohol declined substantially, but the reduction was even more marked after termination of the drug.

Although the reasons for the long-term action of *p*CPA are not clear, the mechanism may be local depletion of serotonin from one or more of the limbic structures that comprise the drinking-emotional "neural circuit." This interpretation is limited by the fact that parallel serotonin and catecholamine levels have not been determined in our *p*CPA, M*p*T, and control animals.

Our findings suggest that restoration of normal neurochemical function in an organism that drinks alcohol excessively, regardless of the etiology of an aberrant drinking pattern, may be within the realm of possibility.

Alcoholism and Its Treatment in Norway

JOHN GREVE

Though the consumption of alcohol in Norway is less than in the rest of Scandinavia apart from Finland, and much lower than in most other European countries, alcoholism is regarded as a serious problem.

The public debates, the number of organizations to combat the use and effects of alcohol, stringent laws controlling its sale, and the powers and functions of municipal temperance committees combine to reveal powerful moral attitudes directed at the consumption of alcohol. The universality and strength of feel-

Condensed with permission from *Case Conference*, 15 (3): 109–114, 1968.

ings of disapproval and guilt can only be comprehended by people from other countries with strong Lutheran or Calvinist traditions.

Both alcohol and alcoholism are the objects of legal, educational, medical, and welfare measures and activities. The Ministry of Social Affairs is responsible for controlling manufacture and sale of alcohol, appointing the National Temperance Council and supervising its work as well as that of the municipal temperance committee, and for the treatment of alcoholics—using both "treatment" and "alcoholics" broadly.

Preparation and sale of wines and spirits is a state monopoly. Locally, the sale or serving is regulated by municipal temperance committees to whom the state alcohol monopoly (Vinmonopol) must apply if it wants to open wholesale or retail sales in the municipality. The Vinmonopol has shops in only 35 of the 450 municipalities.

There are no saloons or publichouses and serving drinks in restaurants and hotels is controlled. No alcohol may be served unless food is also bought. The food does not have to be eaten, and there is a joke about the weeks-old sandwich reappearing when drinks are ordered.

Alcoholic drinks bear a heavy duty which has both fiscal and temperance objectives, and even where licenses are granted the laws regulating sales are strict. The situation is one of near-prohibition, a state which has persisted since the failure of total prohibition in the twenties. Taking alcohol is not socially approved, and those who want to indulge must be prepared to make some effort and pay the price—this is the philosophy behind the arrangements.

The licensing laws were eased during 1968, but the government has reiterated that the continuation of close control is desirable and proper.

Municipal temperance committees were established in 1932 after it had become accepted that the misuse of alcohol had implications which needed informed treatment rather than moral strictures or penal sanctions—though such measures are still employed. The committees are nominated by municipal councils and consist of at least three members, one of whom should be a doctor. The primary function of the committee is to work for greater temperance through:

1. "Dealing with" or "assisting" persons who misuse alcohol or other intoxicants or narcotics and offering advice and help to their families.
2. Supporting and developing educational activities relating to alcohol.
3. Acting as a specialist advisory committee to the municipal authority.

Although temperance committees are empowered to take action on their own initiative with persons who through the use of alcohol or drugs are judged to be a danger to themselves or others or to property, action in most cases is a consequence of referral. All convictions for drunkenness must be reported to the committee, and almost three-quarters of referrals to committees are made by the police authorities.

About 95 percent of all persons brought to the committee are men. Apart from referrals by the police, applications to temperance committees come mainly from the person concerned or his family.

Temperance committees may pursue several courses of action: seek to influence the misuser to abstain; help him to find work; assist him to move to a new environment; ask

him to have his wages paid to his wife; or try to ensure that he goes for medical treatment, which might include a stay in a hospital, a nursing home, or a special institution for alcoholism.

If the person fails to keep the arrangements, the committee may place him under supervision for a year. The emphasis is on informing, guiding, and persuading.

The social insurance system—particularly the health services—is used to help in the cure and support of alcoholics and the maintenance of their families. When an alcoholic enters a hospital or other institution, the cost is usually met by the local social insurance office, which may also pay sick benefit. Expenses which fall outside the social insurance schemes are met by the state or the municipality. If an alcoholic is unable to provide for his dependents, it is the temperance committee's duty to give them assistance. In doing so it will bring other official or voluntary agencies into play.

There are 24 special institutions for the treatment of alcoholics. Three belong to the state. The rest are voluntary, but many of these were given grants from the state when they were set up, and a number receive annual grants. The institutions have room for over 700 patients, and more than 3,000 are treated every year. Some of the institutions are combined therapy and observation homes where patients are helped to regulate their consumption of alcohol at the same time as they continue in their jobs and help to maintain their families. Only voluntary patients are accepted at these homes. Alcoholics Anonymous which is extensively represented has several clinics for short-term treatment.

At the national level there is a chief medical officer for the treatment of alcoholics. He is also in charge of the central state institution.

The central administration of the temperance committees is the function of the National Temperance Council. This is a committee of five members appointed by the Crown and is the state's expert committee on use and misuse of alcohol. Its other functions are comparable to those of the local committees in the field of information and education.

The government supports preventive and curative measures in other ways. It allocates substantial amounts to educational and information activities through temperance organizations and the National Council for Temperance Education. These bodies are paid a subsidy towards the salaries of several full-time peripatetic lecturers who travel the country lecturing to schools and organizations.

There is a national research institute in Oslo devoted to studying the alcohol problem, with particular reference to its social aspects. The institute is largely financed by the state, but is an independent research body.

More services for alcoholics and narcotic addicts are being provided and this expansion will continue. Greater emphasis is being put on specialization in treatment—particularly in the psychiatric field—in clinics and hospitals, whether for in- or outpatients. The forms of regulation, control, and treatment are improving, and public discussion of the use and misuse of alcohol is becoming more open, informed, and tolerant. In this, social workers, administrators, and some psychiatrists play no small part.

Architectural Considerations in the Design of Places and Facilities for the Care and Treatment of the Mentally Ill

K. IZUMI

All too frequently an architectural concept is developed before the problem is known. Facilities for the mentally ill are an outstanding example. Evidence is that the architectural milieu not only fails to make a positive contribution to the patients' well-being but is, in fact, harmful.

In designing places and facilities for any handicapped people and particularly those who are referred to as the mentally ill, the architect needs to reexamine his approach. He must be cognizant that the art of architecture should facilitate the art of alleviating human suffering. The architect is dealing with matters of grave consequence which cannot be left to intuition, to chance, or to personal and esoteric concepts. The mentally ill seldom are able to tell what they need and prefer. If they did, the problem of designing facilities for the care and treatment of these people would not exist.

It is of prime importance to distinguish between psychiatric and architectural concepts and to identify those that are interdependent. The psycho-architectural concepts must be extrapolated from the psychiatric. Here we encounter our first major difficulty, as an understanding of the nature of mental illness is difficult for the nonpsychiatrist to follow.

What is essential is an understanding of the "dynamic psychosocial drama" which stems from and returns to the individual patient as a result of his handicap. This drama includes the innumerable social interactions which the patient will be confronted with during the period of his "incarceration." In addition to those related to his well-being, he will be studied and be a subject of research. To achieve architectural solutions which recognize the dynamic psychosocial phenomena requires perception of these phenomena in all their "space-time" dimensions and allowance for the peculiar perceptual distortions experienced by many of those who are ill.

Condensed with permission from the *Journal of Schizophrenia*, 2(1): 42–52, 1968.

Architectural Solutions

Basic among these solutions are those which help to provide *privacy*. We need privacy visually, acoustically, physically, and psychically. A private space should be assigned to an individual so that he can place his belongings in it and identify it as his own.

There is another form of privacy that needs to be provided in our culture. This is for facilities like the toilet. If there is a hierarchy, one might consider it as being first visual privacy, then acoustical privacy, and finally "space-time" privacy. Space-time privacy can be achieved in its ultimate form only by a completely unshared facility, but it can also be achieved to a degree with shared accommodation, if there are sufficient numbers of facilities so there is no "pressure" on their use. Architecturally, this means a completely separate en-

closed space, with its own lockable door.

It is not the architect's perception that counts, but the perception of the handicapped. Lines, color, texture, size, and even mass, density and weight, can be related to the nature of privacy. Plate glass ½ inch thick may be just as effective as a 4-inch masonry wall for acoustical separation. But to those who relate visual to acoustical privacy, or to those who may not be able to distinguish between the two, this element of design is critical in conveying the sense of privacy. These factors are complicated by cultural and related factors. To many Japanese, the sliding paper shoji is sufficient to achieve this sense of privacy and to use thicker, heavier and more substantial material implies confinement rather than just enclosure. In other cultures, privacy is related to spatial separation and isolation and the normal architectural articulation may not be satisfactory.

A further objective should be to minimize problems of confusion in recognizing others. The desirable *social interaction* is only possible with people who are friends or "familiar faces," and there are limitations to the numbers that should be involved. The sizes of rooms and sequential spatial relationships become an important factor in controlling group size and selection.

The teaching function and its facilities should not be increased indefinitely if the topics of interest relate to the number and type of illness of the patients and the attendant social interactions. In other words, the number of students to be taught is, among other things, a function of the specific number of patients and interactions. There may be other forms of teaching where interrelationships and interdependence with the patients do not or need not exist, but these need to be carefully examined to ensure that they will not intrude upon the welfare of the patient.

Similarly, the research and other community mental health center functions must be considered in this way. The patient must be protected from too many interruptions and intrusions. Otherwise, the result may be an informed public, many students, and vast research facilities, but sicker patients.

Overcrowding and overconcentration of people must be avoided. Overcrowding means too little space per person, and overconcentration means too many people together. Simply by adding space, both overcrowding and overconcentration may be alleviated but the essential "space-time" relationship may be lost. The proliferation of spaces for specialized functions can destroy the essential intimate, unambiguous, cohesive, and quiet physical setting which can contribute to achieving an appropriate psychosocial environment.

It is important to avoid creating institutional space. The objective is not to design homelike or motellike structures, but to provide visual qualities that are unambiguous, visually warm, comfortable, reassuring, and cohesive. If the proper quality of *adaptability* is provided, special rooms are not necessary. Provision of private space for each patient and primary and secondary social spaces will reduce the need for special treatment rooms, card rooms, game rooms, TV rooms, classrooms, meeting rooms, and so on.

An adaptable space is one which provides the functional equivalent

of many special spaces, so many functions may be carried on without structural changes. The chairs, tables, and other elements must also follow these principles, e.g., the card table should be suitable in size for other four-person activities, such as eating. If the social spaces are designed for dining, it will be unnecessary to provide a vast, costly, central dining room and cafeteria.

In some instances there are no functional equivalents. This is particularly true with respect to privacy. Incompatible functions should be avoided, particularly if there is visual access to the space and it is used by several persons, none of whom have prime rights to it. A nursing station which combines a place to rest and a place to work conveys misleading impressions which can be confusing or disturbing to both patients and staff.

Wherever possible, there should be *an alternative way out* of a room to minimize the feeling of constraint and to provide a means of "escape." While all doorways or openings should be easy to enter without feeling you are intruding, once inside there should be a feeling that there is a place for you. In shared spaces, this demands that there be more chairs than there are people who normally occupy them.

The provision of alternatives is distinct from repetition of two identical elements. In a recently built psychiatric hospital the main entrance has two pairs of double doors opening into the same lobby. Two sidewalks, with grass between them, lead to the doors. Approaching the building, you have a choice and most people walk on the right. It is not until they are within a few feet of the doorway that a sign becomes legible, saying "Please use other door." Then, after crossing the grass strip and entering the left door, they find the reception counter on the right. Upon inquiry, it was learned that the dual entrance is purely an architectural treatment. Opening the right-hand doors created drafts around the reception area and hence they were kept locked. Apart from the confusion arising during normal use of the building, the dangers under panic conditions should be recognized.

Stairs should be located immediately adjacent to the elevators. Waiting for an elevator is one of the worst of many frustrations, particularly for a patient whose time sense is distorted, who needs to return to his private space as quickly as possible, and who can see no alternative means of reaching his destination. Even though the elapsed time may be the same whether he waits for the elevator or walks up or down the stairs, the latter is much less taxing psychologically.

People have preferences in arranging themselves in relation to each other in a room. Recognition of this preferred psychic-spatial order is important in providing facilities for the mentally ill, so they will not be forced to adjust to conditions which they resist. The usual arrangement of chairs and sofas in some "esthetic" order is not normally consistent with this psychic-spatial order. There should be a predominance of chairs, and these should be spaced to coincide with what the social anthropologists call personal distance.

There are many forms of *perceptual changes and resulting distortions.* Many of these should concern the architect. The complex phenomena of inability to distinguish be-

tween space and time are related to both the visual and auditory senses. The similarity of spaces, as one moves through them, can convey a sense of time slowing down. Moving along a corridor with identical units of environment, one may get the impression of remaining in the same place while time stands still. Visual changes in the surroundings appear to lessen this reaction, but much more understanding of the relationship of the visually perceived world to concepts of time is necessary.

Sounds such as the hum of fans, motors, circulating water, and other building noises affect one's sense of time. Combined with visual elements that might produce stroboscopic effects, noises, sounds or music could have undesirable effects. Patients have been stopped in their tracks when confronted with a checkerboard floor-tile pattern or a flickering fluorescent fixture in a seemingly endless corridor.

Related to this is a perplexing problem of effective use of space and personnel. The objective is to place the space and personnel in proper relationship to the patient at the right time. Often, the patient is unable to interact according to a schedule or other structured situation. Two "well" people can make an office appointment and adjust to changing situations of time and place and other circumstances which affect their moods. But once the patient's train of thought or mood is broken by an intervening experience, it is difficult to recapture the necessary mental state so that effective medical treatment can proceed.

Ambiguity in design should be avoided. One function should be distinguishable from another, and things should not appear to be other than what they are. One of the favorite concepts of the contemporary architect must be examined—the "spatial flow concept." The integration of indoors and outdoors may be so "effective" that one cannot tell whether he is in or out. Furniture and cupboards should not be designed with "false" drawers and other storage features.

The contemporary architect should examine the cherished concept of "spatial illusions." This esthetic concept need not be avoided, but it is important to understand the "how, when, and where" of such design. Some knowledge of "transactional" psychology is of great assistance. Such architectural details as height of a window sill, visual depth of the window reveal, size and shape of the window, reflective quality of the glass, and the induced psychic feeling of security or insecurity, stability or instability, depending on where and on what floor a window occurs, can be very critical. Glass from floor to ceiling and wall to wall, so proliferated by contemporary architects, is inappropriate in facilities for people who have perceptual handicaps. Hardware, details of stair rails, cantilevers, floor patterns, source and types of illumination, etc., must be examined in relation to the whole, so that each element enhances the essential quality of a space.

Again, the architect must not make decisions based on what he thinks the facilities should be but rather on what the patients need to perceive. The challenge for the architect is to design an environment which will help to inculcate and maintain that mood which best facilitates essential psychosocial communication.

Legislation Relevant to Mental Health Enacted by the 90th Congress, Second Session

Public Law 90–574. Health Services Act of 1968

Title III of this Act is the "Alcoholic and Narcotic Rehabilitation Act of 1968," which authorizes $7 million in fiscal year 1969 and $15 million in fiscal year 1970 for alcoholism and $8 million in fiscal year 1969 and $10 million in fiscal year 1970 for narcotic addiction. The Act amends the Community Mental Health Centers Act to authorize grants to public and nonprofit agencies for construction of facilities for prevention and treatment of alcoholism and authorizes construction and staffing of facilities for treatment and rehabilitation of narcotic addicts.

Public Law 90–452. D. C. Alcoholism Rehabilitation Act of 1967.

This Act establishes a comprehensive program of services for chronic alcoholics and for prevention of alcoholism, and specifies that mentally ill persons adjudicated as alcoholics will be treated as mentally ill persons.

Public Law 90–639. Dangerous Drug Penalty Amendments.

Under this Act there are increased penalties for persons trafficking illegally in barbiturates, depressants, amphetamines, and LSD. Illegal possession is now a misdemeanor subject to imprisonment up to one year and a fine up to $1,000 for a first offender, with stiffer penalties for second and third offenders. The Act also stipulates that the court may exercise discretion and impose probation, including psychiatric care, in lieu of imprisonment or fine.

Public Law 90–538. Handicapped Children's Early Education Assistance Act

This Act authorizes grants to public and nonprofit agencies for experimental preschool and early educational program for handicapped children, including programs for emotional development.

Public Law 90–576. Vocational Education Amendments of 1968

Among provisions of this Act is the expansion of the definition of "handicapped" to include mentally retarded and emotionally disturbed persons.

Public Law 90–618. Gun Control

One provision of the Act prohibits any person who has been adjudicated as a mental defective or who has been committed under a court order to a mental institution from shipping or receiving guns and ammunition in interstate commerce.

Mental Health News Digests

Hospital and Community Psychiatry Service Achievement Awards

The winners of the American Psychiatric Association's 1968 Hospital and Community Psychiatry Service Achievement Awards were announced at the 20th Mental Hospital Institute. The awards are presented annually to three outstanding and innovative mental health programs.

The Gold Award was presented to the Prairie View Mental Health Center in Newton, Kansas. The Silver Award went to the Lincoln Hospital Mental Health Services in the Bronx, N.Y. Colorado State Hospital in Pueblo received the Bronze Award for the achievements of its Mental Retardation Center.

Prairie View was recognized for its successful transition from a private psychiatric hospital into a comprehensive community mental health center providing services to patients and consultation to agencies in three counties. Outpatient care and community consultation and education are emphasized. The center serves an average of 35 inpatients, 30 day patients, and 355 outpatients, who come for group or individual therapy, and provides aftercare for 65 patients from Topeka State Hospital. Among the staff of 70, there are four psychiatrists, four psychologists, and seven social workers. Dr. Mitchell Jones is medical director.

The extensive consultation activities of the center are provided under contract to the three counties and are coordinated by a 21-member tri-county Community Mental Health Services Board. In addition to working with the schools, local colleges, and churches, psychiatrists consult with local physicians, visit general hospitals and jails, perform court examinations, and make some home visits. Education committees in each county present public meetings on mental illness and mental retardation and distribute mental health literature.

Lincoln Hospital Mental Health Services was established five years ago to serve a slum area of New York City which had no psychiatric services. Despite such major problems as attracting professional staff willing to face the challenge and gaining the confidence of the community, a psychiatric walk-in clinic was established at Lincoln Hospital in 1964. The facility sees 1,200 patients annually and includes a day hospital, a 24-hour emergency service, a children's crisis unit, vocational rehabilitation services, a drug abuse program, neighborhood service centers to provide "psychosocial first aid," liaison with Bronx State Hospital for inpatient care, and consultation with schools and service agencies. Much of the work of these facilities is carried out by "indigenous" mental health workers trained by the program. It has been described as a program that "reaches the unreachables." Dr. Harris Peck is the director.

Colorado State Hospital was honored for its creation of a 600-bed mental retardation unit as part of the hospital. As a first step, the hospital recognized that its 526 mentally retarded patients scattered throughout the psychiatric treatment divisions were not getting the individual care and treatment most suitable for them. The center was established in July 1965 and is thought to be the only mental re-

tardation program operating as an independent or semiautonomous entity within the larger structure of a psychiatric hospital.

The center provides a milieu in which all residents are encouraged to develop their skills and abilities to the limit of their capacities. The program is designed to meet individual needs of residents, stimulating them to move through progressive levels of achievement with the ultimate goal of moving into the community whenever feasible. Fourteen living areas have been set up, and each is linked to one of the center's four clinical units—medicine, education, training, and placement—which work together to provide medical care, self-care skills, schooling, on-the-job training, and placement. A patient lives in a unit allied to the clinical service which fits his primary need at the time but also participates in program activities of the other units. The treatment includes the special techniques of operant conditioning, behavior shaping, token economy, incentive pay, and cash pay. After two years, the unit had released 218 patients—44 percent to nursing homes, 33 percent on convalescent leave, 19 percent to their homes or job placement, and 4 percent with a foster family. Aftercare services are provided, and the return rate has been 32 percent. Dr. Charles Meredith is superintendent of the hospital.

New Director of the Health Services and Mental Health Administration

Dr. Joseph T. English has been named director of the DHEW Health Services and Mental Health Administration. Dr. English, a psychiatrist, was formerly with the NIMH and with the Peace Corps and more recently has been Assistant Director for Health Affairs in the Office of Economic Opportunity.

Alabama's Mental Health Program

Alabama's mental health program in the coming months will emphasize prevention of mental illness and development of community services, especially for children. The new director of the Alabama Department of Mental Health, Dr. Stonewall B. Stickney, believes that all children entering school should be screened for potential learning or behavioral problems.

Other measures in the planning stage are provisions for voluntary admission to state mental institutions and for setting up a special facility for the criminally insane.

Several multicounty community mental health boards responsible for the administration of comprehensive community mental health center programs have been established. Among other activities, the boards have requested inservice training to acquaint them with the philosophy of the programs and the five essential services; one-day workshops have been held as part of a continuing training program.

During the past several months the Division of Community Services has held workshops and conferences as part of its continuous mental health staff education for comprehensive mental health centers. The Annual Conference was concerned with mental health consultation, which is one of the essential elements of a comprehensive center. The conference presented new theories of consultation and their application in special areas such as the schools, industry, and

other community systems. Other training meetings were concerned with partial hospitalization and with family therapy.

Mobile Mental Health Personal, Social, and Work Adjustment Center

In October 1966 the Mobile, Ala. Mental Health Center and the Vocational Rehabilitation Service formulated a comprehensive program designed to rehabilitate the mentally handicapped to useful and productive vocational attitudes relative to personal, social, and work adjustment in the community. The emphasis is on attitude and behavior modification through experiences designed as a transitional program between hospital, treatment, and community to give mentally ill persons a variety of work, personal, and vocational experiences that will enable them to enter a training-type program and a job in the community.

Each client has a psychiatric diagnosis. Sixty percent of the clients have a serious mental illness and most of them have been hospitalized. The groups are interracial and involve men, women, and young people above the age of 16. The program involves a 4-month minimum experience period; no client is in the program more than 12 months.

The components of the program include administration, communication skills, recreational therapy, activities of daily living in home arts, personal grooming, physical recreation, application and demonstration laboratory, vocational exploration and evaluation, vocational guidance and counseling, and emphasis on the development of work habits, improvement or work tolerance, and job readiness.

Results have been very encouraging. A study of 219 clients showed that only 12 persons returned to the hospital. Thirty-five persons did not benefit fully and were terminated. The remaining 172 persons continued in the program, were employed in the community, or were receiving further specialized training for employment.

Western Restoration Center of Pittsburgh

The Western Restoration Center of Pittsburgh (formerly the Western Geriatric Center), an agency of the State Department of Public Welfare, is an evaluation center serving patients age 65 and over.

The function of the facility is to help meet the problems of the geriatric age group by providing diagnostic screening, short-term therapeutic treatment, realistic placement, and followup service. Emphasis is placed on inpatient evaluation because it is felt that a more thorough diagnostic and therapeutic workup can be accomplished.

Since the Center opened over two years ago, some 270 patients have been admitted, and over a thousand have been referred for outpatient service. Referrals come from many sources, including social agencies, general and mental hospitals, physicians, families, self-referral, and boarding and nursing homes. Most of the patients are those who are "hard to place," such as patients not ill enough to be in a general hospital, not mentally ill enough to be in a State mental hospital, and not disabled enough to be in a nursing home.

If an evaluation indicates that maximum treatment benefit has been experienced by an inpatient, his physician recommends discharge.

A placement recommendation is made after consultation by medical, psychiatric, nursing, and social work specialists, with the recommendation based on the patient's emotional, physical, and social needs.

Bereaved Families

The Eastern Pennsylvania Psychiatric Institute, Philadelphia, is studying problems of bereaved families. The project will study the social, economic, and emotional problems and needs of families who have suffered bereavement either through suicide or vehicular accident.

Previous research has focused on developing effective means to prevent suicides while the new program at the Institute emphasizes study of the problems and needs of surviving members of bereaved families.

The work will be carried out in close collaboration with the Medical Examiner of the Department of Public Health of the City of Philadelphia. Having worked closely with relatives of suicide victims and victims of fatal automobile accidents, the Institute and the Office of the Medical Examiner are convinced that interviews with trained professional people who are particularly concerned with such problems would provide a much needed service to these grieving families and to the community.

The work is to be directed by Dr. Regina Flesch, Medical Research Scientist at the Institute and also a deputized member of the Staff of the Office of the Medical Examiner.

Bond Issues for Mental Health

Voters in Virginia and New Jersey have authorized bond issues for improving mental health facilities, by a margin of more than 2 to 1. A $13.73 million bond issue for State mental hospitals was approved for Virginia, while New Jersey's will provide $66 million for expanded mental health and retardation programs.

Northeast Kingdom Mental Health Service

The Northeast Kingdom Mental Health Service, located in Newport, Vermont, serves three rural mountainous counties—Orleans, Essex, and Caledonia—in northeastern Vermont. The area is quite isolated, primarily agricultural, except for tourism and skiing, and is an economically depressed area.

Established in 1966, the Service has developed a broad and flexible network of services adapted to the immediate needs of the people of the three counties. Hospitalization is kept to a minimum, but when necessary is available in three local hospitals and in nursing homes. The range of services includes play therapy with children, various kinds of adult therapy groups, a sheltered workshop for patients in the day-care program, consultation to schools, physicians, and clergymen, training programs, and a weekly radio program on mental health subjects.

Director of the program is Dr. Gerald D. Errion.

Georgia Mental Health Institute

The Georgia Mental Health Institute was opened in 1965 under the Georgia Department of Public Health, Dr. John H. Venable, Director; Division of Mental Health, Dr. Addison M. Duval, Director; and Dr. Jesse F. Casey as Director of the Institute.

The mission of the Institute is threefold: teaching, research, and patient treatment. Its goals are to train professionals in the mental health disciplines to staff the State's comprehensive mental health facilities; to conduct research into the many areas of mental health and mental illness; and to treat mental illnesses under carefully controlled conditions and from this treatment and study to reach broader principles in prevention, patient care, and aftercare.

Academic training programs in the major mental health disciplines are conducted; these include psychiatry, clinical psychology, psychiatric social work, clinical chaplaincy, and psychiatric nursing.

The Institute's 33-acre campus is made up of a six-story main building for administration, research, and education, and eight patient cottages—five for adults and one each for children, adolescents, and geriatric patients—forming a broad semicircle around the main building. Many of the outpatients carried by the Institute would be considered only as inpatients at many other treatment facilities, but through the intensive treatment program, these patients receive needed care without occupying beds.

Plans are to consolidate the Georgian Clinic, which is the treatment facility for alcoholism and drug dependency, into the operations of the Institute in the near future, thus making the Institute a complete mental health facility.

Thus far, the Institute's principal research projects have been in the area of human genetics. Through the use of a complete audiovisual facility, research projects have been video-taped for training and further study. A laboratory of experimental psychopathology has recently been established.

The address of the Georgia Mental Health Institute is 1256 Briarcliff Rd. N.E., Atlanta, Ga. 30306.

Mental Health Insurance

Prepaid mental health services are now provided by the Health Insurance Plan of Greater New York for its members in New York City and Nassau County. The program is the result of a three-year demonstration project. The services are available as an option at a small additional monthly premium.

The services, which are provided by teams made up of psychiatrists, clinical psychologists, and psychiatric social workers, include psychotherapy and counseling for both children and adults.

Advisory Committee on Alcoholism

The Advisory Committee to the NIMH National Center for Prevention and Control of Alcoholism held its first meeting in September 1968.

The committee, composed of some of the nation's foremost authorities in the field of alcoholism, will review the Center's program and help the Center assign priorities in its own and in grant-supported research programs.

Dr. Francis Braceland, Senior Consultant at the Institute of Living in Hartford, Connecticut, is Chairman and members are Drs. Harold W. Demone, Jr., Executive Director, The United Community Service of Metropolitan Boston; Norbert Freinkel, Kettering Professor of Medicine, Northwestern University Medical School; P. Herbert Leider-

man, Department of Psychiatry, School of Medicine, Stanford University; Samuel Messick, Executive Director of Research Programs, Educational Testing Service; David J. Pittman, Director, Social Science Institute, Washington University; Gardner C. Quarton, Program Director, Neurosciences Research Program, Massachusetts Institute of Technology; Maurice Victor, Chief, Neurology Service, Cleveland Metropolitan General Hospital; Herbert Weiner, Associate Chief, Division of Psychiatry, Montefiore Hospital and Medical Center; Wilfred W. Westerfeld, Acting President, Upstate Medical Center, State University of New York; David Zeaman, Professor of Psychology, Department of Psychology, University of Connecticut.

At its first meeting, the 12-member committee was introduced to the overall program of the NIMH center. The group heard descriptions of specific research projects the center is supporting and toured the center's new research facilities in Saint Elizabeth's Hospital.

One of the purposes of appointing such a committee is to encourage more research in the field of alcoholism. The need for additional research was highlighted by the recent Supreme Court decision which cited the lack of medical evidence as a major reason why the court upheld the jailing of alcoholics.

Training in Mental Health Statistics

The Biostatistics Department of the University of North Carolina School of Public Health has a training program in mental health statistics. The program, which leads to a Master of Science in Public Health degree in Biostatistics, includes regular statistics courses, augmented by courses that discuss the specific statistical problems in the mental health field. The program lasts eleven months and consists of two academic semesters followed by a ten-week field training experience during the summer in some mental health agency.

Additional information may be obtained from Dr. Donna B. Ruhl, Department of Biostatistics, School of Public Health, University of North Carolina, Chapel Hill, N.C. 27514.

Alaskan Mental Health Programs

The Division of Mental Health in the Alaska Department of Health and Welfare provides comprehensive institutional and community mental health services to all in need of help. There has been an increase in use of the services throughout the State. Community mental health clinics are located in Juneau (Southeastern), Anchorage (Southcentral), and Fairbanks (Northern). These clinics provide services to outlying areas by itinerant mental health teams as well as service to those in the immediate vicinity of the clinic. The Alaska Psychiatric Institute is made up of two branches, the Anchorage Branch which provides primarily acute psychiatric care and the Valdez Branch which provides care for the mentally retarded.

Social-Psychological Specialists for Work and Research in Inner-City Schools

An experimental training program to prepare social-psychological specialists to work in inner-city schools and to do research on planned change in such schools has been launched by the Department of Education of the University of Chicago. The program is designed

for liberal arts graduates who wish to work in inner-city schools in roles designed to facilitate interpersonal and intergroup communication, conflict management, cooperative planning, and program innovation.

An M.A. graduate of the program will be expected to take a position in a school and thereby to help work out the role requirements of the social psychological specialist; the Ph.D. graduate, after considerable practicum work, will be expected to take a position at a university and to continue training such specialists and to do research on planned change in school systems.

The Field Director of the program is Kenneth E. Smith, and the Program Director is Frederick F. Lighthall from whom further information may be obtained by writing to him at the NIMH Program for Psychological Specialists, University of Chicago, 5835 S. Kimbark Ave., Chicago, Ill. 60637.

Training Reporters in Mental Health

Eight students with undergraduate training in journalism, psychology, sociology, social work, or a related field, are now in a special program in mental health mass communications at Kansas State University in Manhattan, Kan. The two-year program is geared to preparing the trainees for jobs as newspaper reporters, magazine writers, and information officers specializing in mental health, social problems, and human behavior.

A total of three semesters of class work at the University will be augmented by a semester of supervised field work experience at a mental health facility such as the Menninger Foundation and by a semester at a daily newspaper. Upon completion, graduates will receive a Master of Science degree. The core of the program consists of two seminars that will focus on such issues as public attitudes toward mental illness, the role of the mass media in mental health reporting, and reporting techniques. A special feature of the program will be presentations by news executives and guest lecturers in the mental health field.

The Project Director is Dr. Deryl R. Leaning.

Continuing Education in Community Mental Health for Social Workers

At the School of Social Welfare, University of California at Berkeley, community mental health training is being given to an estimated 200 social workers. Begun in the Fall of 1968, the program will initially be aimed at the social worker already involved in programs for the mentally ill and retarded. Target groups will also include social workers employed in community facilities that assume some responsibility for mental health problems and nonprofessionals working directly and primarily with the mentally ill.

The program is an outgrowth of a three-year pilot project which identified the needs of social workers in the six-county San Francisco Bay Area. As a result of evaluation by participants and faculty, the School of Social Welfare is giving highest priority to the educational needs of those in leadership positions in mental health programs. The program will offer instruction in direct and indirect techniques of community mental health care, com-

munity mental health concepts and philosophy, and behavioral and social science concepts and theory as applied to community mental health.

The Project Director is Dr. Milton Chernin.

Sex Information and Education Council

The Sex Information and Education Council of the U.S. (SIECUS) is now in its sixth year of operation. A voluntary, nonprofit educational organization, SIECUS is engaged in an intensive and far-ranging program of sex education "to establish man's sexuality as a health entity" [from the SIECUS charter]. It follows the policy of emphasizing the involvement of the whole community in understanding the goals and purposes of sex education. In its work with communities, it involves not only the educators, but also the clergy, medical, and other helping professions, and parents.

SIECUS's Board of Directors is made up of 52 representatives from general medicine, physiology, social work, psychiatry, obstetrics and gynecology, public health, education, law, psychology, marriage counseling, the clergy, and business and industry. Dr. Mary S. Calderone is Executive Director.

In addition to a quarterly *Newsletter*, SIECUS has issued the first six in a series of study guides; the topics are Sex Education, Homosexuality, Masturbation, Characteristics of Male and Female Sexual Responses, Premarital Sexual Standards, and Sexual Relations During Pregnancy and the Post-Delivery Period.

The address of the Council is 1855 Broadway, New York, N.Y. 10023, and the Publications Office is located at 419 Park Ave, South, New York, N.Y. 10016.

Center for Study of Sex Education in Medicine

The Center for the Study of Sex Education in Medicine has been established at the University of Pennsylvania School of Medicine. This national scholarly center will work with medical schools in the training of doctors to deal more helpfully with sexual problems of their patients. Its program will be concerned with such activities as collection and dissemination of existing and planned curricula, evaluation of courses and curricula, assisting medical schools with curriculum design and preparation of appropriate teaching materials, and evaluation and improvement of continuing education for physicians. The Center is headed by Dr. Harold I. Lief.

Study of Kansas City Riots

Conditions surrounding the April 1968 riots in Kansas City, Mo., are being studied in an attempt to broaden the understanding of social disorders across the country. The Greater Kansas City Mental Health Foundation will seek to learn whether the riots were the climax to previous flare-ups in certain parts of the city and whether they were an intensification of previous individual behavior. The study will provide a basis of comparison of the Kansas City disturbances with similar disorders in other cities.

The study hopes to obtain an accurate account of what actually occurred during the riots, what precipitated the disturbances, what happened afterwards, and how people—those who took part and those who did not, both white and Ne-

gro—felt about the events. It will also examine the attitudes held by rioters and nonrioters toward the assassination of Dr. Martin Luther King, Jr., the police, and other issues, and will attempt to determine if there was a specific correlation between areas of the city hardest hit by the riots and areas with a history of robberies and vandalism, between individual stores that were damaged or looted and stores that had been victimized in the past, and between active riot participants and persons who had records of previous crimes. Such information may provide clues to remedial action that can be taken by the community and its leaders.

The study will be based primarily on extensive surveys and interviews with a sample of some 250 persons in four groups—riot participants, bystanders at the riots, and Negroes and whites who were not in the riot areas.

Dr. Charles B. Wilkinson, Executive Director of the Foundation, is director of the project.

Work Project for Rural and Urban Youth

The end of August 1968 marked the end of a summer experiment in group living for several hundred teen-age youngsters from New York City and the State of Vermont. Under contract to the National Institute of Mental Health, the Youth Project of Vermont, Inc., a nonprofit organization, set up summer programs at Ripton and Lyndonville, Vt., designed to bring rural white and urban Negro and Puerto Rican youth together for a common learning experience.

At Lyndonville, 40 Vermont boys and girls aged 14 to 16 joined a like number from New York's Bronx and Harlem in each of two four-week sessions at Lyndon State College. Teachers from the college and professionals from New York led the arts and crafts-oriented program. Among their projects, the youngsters produced a small book of verse; they wrote the poetry, set the type, printed and bound the book.

They made tape recordings of panel discussions and dialogue which they broadcast on the local radio station. In addition, they swam, painted, danced, and generally joined in a diverse program of educational, social, and athletic activities.

The Ripton site, previously a Job Corps camp, in Green Mountain National Forest, was converted to a performing arts center for the one hundred 12–14-year-olds who came from New York and Vermont for each of the two month-long sessions. Here they were introduced to the varied aspects of the theater. They wrote, directed, and acted in their own plays. They were taught modern dance. As in the Lyndonville program, the instructors were professionals, both white and Negro, from Vermont and New York, and the counselors were generally college students.

In addition to introducing the youngsters to activities they might want to pursue further, the program was effective in changing some previously held attitudes. Not only did the Vermont teenagers learn about the problems of ghetto youth, but the New York teenagers realized that the poverty of rural white America could impose as many hardships, if not more, than their own. As one little Puerto Rican girl put it, "poverty is the same *all* over."

The program had its effects on the Vermont community, too. One pharmacist in Lyndonville, reportedly against the project at the start, was advertising project activities by summer's end. Enthusiasm generated by the program is running so high among project organizers in Vermont that plans are being discussed for a year-round program of this kind.

Training Suicide Prevention Workers

A regional center to train workers in suicide prevention has been established at Emory University, Atlanta, Ga. The program will offer short-term training in suicide prevention for professional and nonprofessional workers in the Southeast.

It will be a flexible program to meet the differing needs of communities represented by the trainees. Among the opportunities will be training for emergency telephone operators, development of techniques for establishing suicide prevention and emergency mental health services, and clinical training for professional personnel. Nonprofessional workers, including volunteers, may enroll in monthly two-day training sessions; professional workers will attend quarterly three-day seminars.

Instruction will be offered by the Department of Psychiatry of Emory University in cooperation with the Fulton County Emergency Mental Health Service. Dr. Charles H. Edward is director of the project.

Postdoctoral Training Program in Psychiatric Epidemiology

A Postdoctoral Training Program in Psychiatric Epidemiology has been initiated at the College of Physicians & Surgeons of Columbia University. The program is intended for professionals anticipating full-time research careers in the epidemiology of mental disorders. Trainees may have professional backgrounds in psychiatry, medicine, sociology, human genetics, biostatistics, epidemiology, public health, social work, or related fields.

In addition to a core curriculum, a specific training program is developed for each individual. Trainees attend University courses and seminars, do research work supervised by the staff of the Psychiatric Epidemiology Research Unit, participate in advanced seminars in the epidemiology of mental disorders, and do special projects under tutorial supervision.

The following skills as applied to psychiatric epidemiology are emphasized: psychiatric diagnosis; classification of environments; interviewing; data processing; analysis and interpretation; identifying gaps in knowledge and opportunities to fill them; research design; organization and administration.

Training may last from one to five years, depending on the individual's past experience and current needs. Although no special degree or certificate is offered, fellows with the training program can concurrently be candidates for advanced degrees in a discipline other than that of their basic discipline. By special arrangement trainees in the last stage of fulfilling requirements for a doctoral degree can sometimes be accepted.

The program is administered through the Division of Epidemiology of Columbia University School of Public Health and Administrative Medicine, chaired by Dr. Mervyn Susser. Dr. Ernest M. Gruenberg is Program Director.

Dr. Alex Richman is Training Director, and correspondence regarding the program may be addressed to him at 722 West 168th Street, New York, N.Y. 10032.

Employment of Former Mental Patients

The majority of mental hospitals in the U.S. now have programs aimed at preparing mental patients for work and helping them to find jobs after they return home. This is the finding of a survey of nearly 200 State mental hospitals by the President's Committee on Employment of the Handicapped.

According to the survey, 86 percent of the mental hospitals have vocational rehabilitation counselors or employment service officers on the hospital grounds—full or part-time—to assist patients with their vocational plans. Generally, these services begin almost as soon as a patient is admitted, so that his entire inhospital rehabilitation can be built around realistic job goals.

The survey also showed that 89 percent of the hospitals have in-hospital work programs, under which patients perform regular duties each day for which they may receive pay. Purpose of these programs is to build good work habits, and to prevent mental patients from losing touch with the world of work.

Fifty-one percent of the hospitals use sheltered workshops to give patients an even greater degree of work skills and work habits. In many cases, these workshops, manned entirely by mental patients, perform prime as well as subcontract work for local businesses and industries. Despite hospital settings, the atmosphere and working conditions of these workshops are indistinguishable from those in outside businesses and industries. Twelve percent of the hospitals reported they have volunteer committees of employers who come into the hospital to help patients with their vocational planning. This is a new trend and the proportion of these volunteer committees is growing rapidly.

A copy of the 9-page survey is available from the President's Committee on Employment of the Handicapped, Department of Labor, Washington, D.C. 20210.

Psychiatric Utilization Review

Psychiatric Utilization Review: Principles and Objectives has been published by the American Psychiatric Association. Based on a conference held in 1967, the booklet shows how the utilization review process can be used to improve patient care, and need not be considered merely another administrative chore for the Medicare program.

The 53-page booklet briefly covers general considerations of utilization review and, in more detail, special considerations for psychiatric utilization review. Descriptions of utilization review in four hospitals are given: Shepard and Enoch Pratt Hospital, Towson, Md.; St. Luke's Hospital, New York City; Saint Elizabeths Hospital, Washington, D.C.; and St. Francis General Hospital, Pittsburgh, Pa.

Appendixes include the Federal regulations for utilization review, and two statements by the Joint Commission on Accreditation of Hospitals, one on hospitalization review plans and the other on medical records departments.

The booklet is available for $1.00 from the American Psychiatric As-

sociation, 1700 Eighteenth Street, N.W., Washington, D.C. 20009.

Prevention of Suicide

Prevention of Suicide (WHO Public Papers No. 35) emphasizes that suicide prevention is an important public health responsibility. Suicide is not only among the first 5–10 causes of death in European and North American countries, but is also a more important problem in the developing countries than was suspected.

The World Health Organization consulted experts who were experienced in the organization of suicide-prevention centers and in research on suicide problems. This information was supplemented by an analysis of the available literature and statistics.

The 84-page publication (in English, but French, Russian, and Spanish editions are in preparation) is available for $1.25 from the Columbia University Press, 136 S. Broadway, Irvington-on-Hudson, N.Y. 10533. Orders may also be addressed to the World Health Organization, Distribution and Sales Unit, Geneva, Switzerland, but must be paid for in pounds sterling, U.S. dollars, or Swiss francs.

Survey of Research Facilities and Manpower in the Brain Sciences

The National Academy of Sciences has published the IBRO *Survey of Research Facilities and Manpower in Brain Sciences* in the United States. The survey was supported by a contract with the National Institute of Mental Health and supervised by the Committee on Brain Sciences, Division of Medical Sciences of the National Research Council. IBRO is the International Brain Research Organization.

Purpose of the survey was to identify scientists and their research interests—who is doing what, and where—in fields relevant to brain and behavior. The survey contains information on 4,245 researchers furnished by 880 respondents in 373 organizations. Descriptions of research are limited to current work. The survey was prepared for a wide readership—students seeking an overview of training in basic sciences, foreigners with varying degrees of familiarity with the U.S., researchers looking for opportunities in specific fields, and science administrators.

Copies are available free from the Committee on Brain Sciences, Division of Medical Sciences, National Research Council, National Academy of Sciences, Washington, D.C. 20418.

Health Insurance for Mental Illness

Health Insurance for Mental Illness presents the results of a recent survey of psychiatric insurance coverage. It reviews developments over the past five years and outlines the coverage provided by the various insurance plans. Published by the Joint Information Service of the American Psychiatric Association and the National Association for Mental Health, the 89-page book is available for $2.50 from the American Psychiatric Association, 1700 Eighteenth St. N.W., Washington, D.C. 20009.

Meeting of the National Association for Mental Health

The National Association for Mental Health held its 1968 meeting in Boston on November 20–23, 1968. The Honorable Wilbur J. Cohen opened the General Session

with an address "Through Today's Crises to Tomorrow's Health."

He described a 10-point program for mental health: Increased research particularly in the areas of depression and memory; more mental health manpower; additional community mental health centers; additional insurance for mental illnesses; more services for children and youth; better services for the poor; family planning services; evaluation of State laws on services; better programs for alcoholism, delinquency, drug addiction; an improved environment that will foster better mental health.

Several awards were made at the meeting. Mrs. Santa DeGross of Weehawken, N.J. received the Katherine Hamilton Volunteer-of-the-Year Award for her years of service on behalf of the mentally ill. Mrs. DeGross, who also serves as volunteer executive director of the Hudson County Mental Health Association, designated the $1,000 prize for use in starting a halfway house for discharged patients.

Two newspapers were cited for their treatment of mental health issues: The *Daily Herald-Telephone* of Bloomington, Ind. won first place in the Mental Health Bell Award competition for its year-round coverage. "What Price Victory?"—a series by Mrs. Barbara Jelinek of the McMinnville, Ore. *News Register*—won the newly established award given to the non-daily newspaper running the best features and/or series on mental health. The articles dealt with the Statewide mental health situation in Oregon.

The Prevention Award, given to the NAMH division or chapter which has designed and carried out the most creative program in the area of prevention, went to the Wisconsin Association for Mental Health. Since its program began in 1965, almost a thousand teachers have participated in educational workshops.

Dr. Henry Davidson was honored for his service as editor of the NAMH journal *Mental Hygiene*.

A special award was made to the Scottish Rite of the Northern Masonic jurisdiction for its 35 years of research on schizophrenia. The Scottish Rite Schizophrenia Research Program has been instrumental in many significant discoveries in this area.

At this meeting the outgoing president of the Association, Earl Warren, Jr., was succeeded by Mrs. Burton Joseph.

White House Conference on Children and Youth

The seventh decennial White House Conference on Children and Youth is now in the planning stages. Staff of the Conference believe that it will be one of the most important conferences since the one called by President Theodore Roosevelt. By 1970, more than half the population of the U.S. will be under 25 years old, which will lead to new and increased demands on health, education, and welfare services. Plans for the Conference call for active involvement of individuals and organizations at the State and local level, as well as participation of many young people themselves. Dr. Joseph H. Douglass is Staff Director for the Conference.

☆ U.S. Government Printing Office: 1969—347-084/416-2

recent nimh publications

A single copy of these publications may be obtained from the Publications Management Program, LL02, National Institute of Mental Health, 5454 Wisconsin Ave., Chevy Chase, Md. 20015. A complete list of all available NIMH publications may also be obtained from the Publications Management Program. If a price is given, the publications may be ordered in quantity from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Enclose check or money order made payable to the Superintendent of Documents.

Psychological and Social Aspects of Human Tissue Transplantation. An annotated bibliography of 176 references, covering therapeutic uses of human tissue; psychological, ethical, and legal aspects of transplanting human tissue; psychological, ethical, and moral issues in artificial survival; death; reporting medical advances to the public; psychological factors in surgery; and medical experimentation in human subjects. Prepared by Jacquelyn H. Hall, M.S. and David D. Swenson, M.D., National Clearinghouse for Mental Health Information, NIMH. PHS Publication No. 1838. 40¢

Mental Health Services for Children. A 20-page pamphlet focusing on the community mental health center. Examples of successful programs for children are presented as suggestions of what can be done in community programs to improve treatment and preventive services. Prepared by the Public Information Branch and the Center for Studies of Child and Family Mental Health, NIMH. PHS Publication No. 1844. 30¢

Occupational Mental Health Notes, April 1968. This serial publication is issued at irregular intervals as appropriate material is collected, and is intended for the scientific and professional community interested in occupational mental health and to executives in management and labor. Each issue contains abstracts of current literature and reports on recent developments. Prepared for the National Clearinghouse for Mental Health Information under a contract with the Center for Occupational Mental Health, Department of Psychiatry, New York-Cornell Medical Center.

Crime and Delinquency Abstracts, Vol. 5, No. 9. Cumulative Subject Index. A 52-page subject index to the volume, which contains abstracts of the current literature on crime and delinquency and summaries of research in progress. Issued by the National Clearinghouse for Mental Health Information, NIMH.

DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION
NATIONAL INSTITUTE OF MENTAL HEALTH
5454 WISCONSIN AVENUE
CHEVY CHASE, MARYLAND 20015

OFFICIAL BUSINESS

POSTAGE AND FEES P
U.S. DEPARTMENT OF H